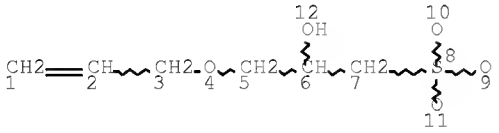
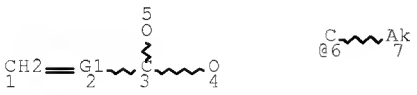
STRUCTURE SEARCH

```
=> d his l125

     (FILE 'HCAPLUS' ENTERED AT 16:12:38 ON 23 JUL 2009)
L125         10 S L122 AND (L123 OR L124)

=> d que stat l125
L1            1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  US20080035287/
                PN
L3            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  MALEIC
                ACID/CN
L4        32238 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  110-16-7/CRN

L5            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  ITACONIC
                ACID/CN
L6         6171 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  97-65-4/CRN
L7            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  ACRYLIC
                ACID/CN
L8        69687 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  79-10-7/CRN
L9            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  METHACRYLIC
                ACID/CN
L10       54330 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  79-41-4/CRN
L11      152885 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (L3 OR L4 OR
                L5 OR L6 OR L7 OR L8 OR L9 OR L10)
L12           STR
```



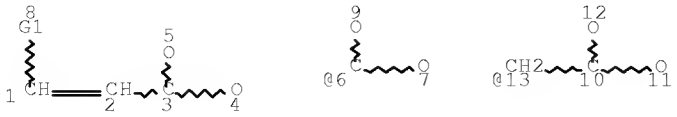

```
NODE ATTRIBUTES:
CONNECT IS E1  RC AT   9
CONNECT IS E1  RC AT  10
CONNECT IS E1  RC AT  11
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  12

STEREO ATTRIBUTES: NONE
L14         213 SEA FILE=REGISTRY SSS FUL L12
L16         135 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L14 AND L11
L17           STR
```




```
VAR G1=CH/6
NODE ATTRIBUTES:
CONNECT IS M1  RC AT   4
CONNECT IS E1  RC AT   5
CONNECT IS E1  RC AT   7
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X12 C  AT   7
```

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 7

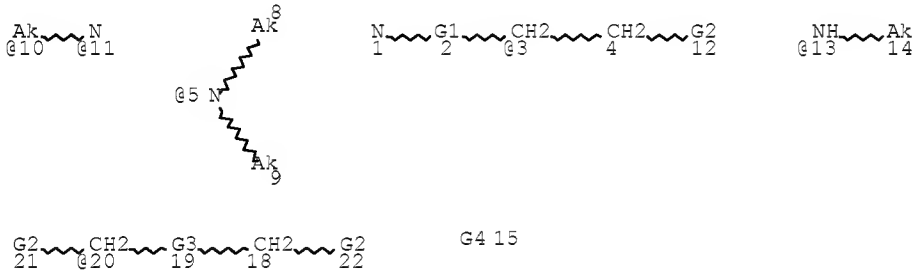
STEREO ATTRIBUTES: NONE
L18 STR



VAR G1=6/13
NODE ATTRIBUTES:
CONNECT IS M1 RC AT 4
CONNECT IS E1 RC AT 5
CONNECT IS E1 RC AT 7
CONNECT IS E1 RC AT 9
CONNECT IS E1 RC AT 11
CONNECT IS E1 RC AT 12
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L20 175 SEA FILE=REGISTRY SUB=L14 SSS FUL L17 OR L18
L22 13 SEA FILE=REGISTRY SUB=L14 SSS FUL L17 AND L12 AND L18
L23 175 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L20 OR L22
L24 STR

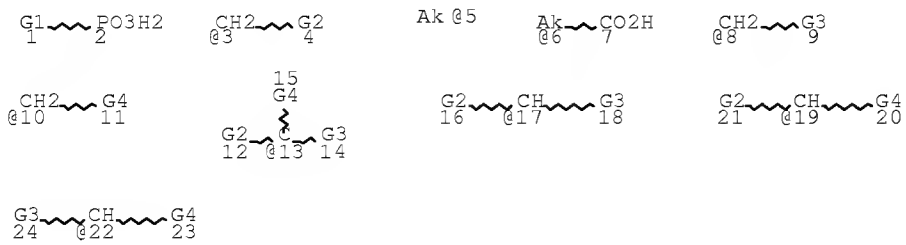


REP G1=(0-10) 10-1 11-3
VAR G2=NH2/13/5
REP G3=(1-8) CH2
VAR G4=3/20
NODE ATTRIBUTES:
CONNECT IS E2 RC AT 10
DEFAULT MLEVEL IS ATOM
GGCAT IS LIN SAT AT 10
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E2 C AT 10

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

```
L26             SCR 1918 OR 1838 OR 1929 OR 2003 OR 1925 OR 1983 OR 2019
 OR 1925
L28         6807 SEA FILE=REGISTRY SSS FUL L24 NOT L26
L32              STR
```




```
VAR G1=CH3/3/8/10/13/17/19/22
VAR G2=OH/5/6/CO2H
VAR G3=OH/5/6/CO2H/PO3H2
VAR G4=OH/5/6/PO3H2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X6 C  AT   5
ECOUNT  IS M1-X6 C  AT   6

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  24

STEREO ATTRIBUTES: NONE
L34       16568 SEA FILE=REGISTRY SSS FUL L32
L35           1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  7722-84-1/RN

L36           1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  7722-86-3/RN

L37           1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  79-21-0/RN
L38           3 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (L35 OR L36
                OR L37)
L42         175 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L16
L43         201 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L23
L44         285 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L14
L45      103950 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L28
L46       28082 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L34
L47      125122 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L38
L48          42 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND (L45
                OR L46)
L50             SEL  PLU=ON  L38 1- NAME :      90 TERMS
L51      150692 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L50
L52           1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L48 AND L51
L53      376956 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  ?PEROXIDE? OR
                ?PEROXYGEN?
L54           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L48 AND L53
L57             QUE  SPE=ON  ABB=ON  PLU=ON  TREAT? OR PRETREAT? OR CON
                DITION? OR PRECONDITION? OR PROCESS?
L58          21 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L48 AND L57
L59             QUE  SPE=ON  ABB=ON  PLU=ON  FIBER? OR FIBRE# OR FILAME
                NT? OR THREAD? OR STRAND? OR RIBBON? OR FILIFORM? OR LI
                SLE?
L61          21 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND L58
L62          16 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND L59
L63           1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L1 AND L62
L64          10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L62 AND L57
L65           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND (L47
                OR L51)
```

```
L66           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND L53
L67           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L65 OR L66
L68             QUE  SPE=ON  ABB=ON  PLU=ON  BLEACH? OR CHELAT?
L69           5 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND L68
L70           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND (L47
                OR L51 OR L53 OR L68)
L71           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L65 OR L66
                OR L67) OR L69
L72           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L70 AND L71
L73         285 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L42 OR L43
                OR L44)
L74          42 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND (L45
                OR L46)
L75          42 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L74 AND L48
L76          25 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L75 AND (L57
                OR L59 OR L68 OR L47 OR L51 OR L53 OR L68)
L78      215855 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  43/SC,SX
L79           4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L76 AND L78
L80             QUE  SPE=ON  ABB=ON  PLU=ON  PAPER? OR PULP? OR WOOD? O
                R LIGNIN?
L81       38749 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L80(3A)L59
L82           7 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L75 AND L80
L84           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L76 AND L80
L85             QUE  SPE=ON  ABB=ON  PLU=ON  ?POLYM?
L86      103950 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L28
L87       28082 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L34
L88      131561 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L86 OR L87
L89        5621 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L88 AND
                CHELAT?
L90        1329 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L89 AND L85
L91         571 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L90 AND L57
L92          54 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L91 AND
                (BLEACH? OR L47 OR L51 OR L53)
L93           3 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L92 AND (L59
                OR L80 OR L81)
L94        1490 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L88 AND L78
L95        1347 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L94 AND (L47
                OR L51 OR L53 OR L57 OR L59 OR L68 OR L80 OR L81)
L96         101 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L95 AND (L90
                OR L81)
L97          56 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L96 AND L57
L104         26 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L97 AND (L73
                OR L85)
L105         37 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L104 OR L52
                OR L54 OR L79 OR L82 OR L84 OR L93
L106         37 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L105 AND (L80
                OR CELLULOS?)
L107         37 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L61 OR L62
                OR L63 OR L64 OR L65 OR L66 OR L67) OR (L69 OR L70 OR
                L71 OR L72)
L108         14 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L107 AND (L80
                OR CELLULOS?)
L109         10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L107 AND L78
L110         47 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L106 OR L108
                OR L109
L111         47 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L110 AND (L73
                OR L85)
L112         38 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L111 AND L78
L113         38 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L112 AND (L73
                OR L45 OR L46)
L114         12 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L113 AND L73
L115         22 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND
                CHELAT?
L116     125753 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  "CHELATING
                AGENTS"+ALL/CT
L117         35 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND L116
L118         75 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L115 OR L117
```

```
                OR L48
L119          4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L118 AND L57
                AND L59
L120          4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L118 AND L59
L121         78 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L114 OR L115
                OR (L117 OR L118 OR L119 OR L120)
L122         15 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L121 AND L78
L123            QUE  SPE=ON  ABB=ON  PLU=ON  PY=<2005 NOT P/DT
L124            QUE  SPE=ON  ABB=ON  PLU=ON  (PY=<2005 OR PRY=<2005 OR
                AY=<2005 OR MY=<2005 OR REVIEW/DT) AND P/DT
L125         10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L122 AND
                (L123 OR L124)
```

STRUCTURE SEARCH RESULTS

```
=> d l125 1-10 ibib ed abs hitstr hitind

L125 ANSWER 1 OF 10  HCAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         2006:1253903  HCAPLUS  Full-text
DOCUMENT NUMBER:          146:9493
TITLE:                    Hydrophobic polymers and their use
                          in preparing cellulosic
                          fiber compositions
INVENTOR(S):              Doherty, Erin A. S.
PATENT ASSIGNEE(S):       Hercules Incorporated, USA
SOURCE:                   PCT Int. Appl., 33pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    --------------------
     --------
     WO 2006127050         A1    20061130    WO 2005-US46946
                                                                   2005
                                                                   1223
                                                 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
             CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,
             ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
             KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
             LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ,
             OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
             SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
             ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
             HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI,
             SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL,
             SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
     US 20060266488        A1    20061130    US 2005-313504
                                                                   2005
                                                                   1221
                                                 <--
     AU 2005332031         A1    20061130    AU 2005-332031
                                                                   2005
                                                                   1223
                                                 <--
     CA 2609546            A1    20061130    CA 2005-2609546
                                                                   2005
                                                                   1223
                                                 <--
     EP 1910617            A1    20080416    EP 2005-855496
                                                                   2005
                                                                   1223
                                                 <--
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
             HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE,
             SI, SK, TR
     JP 2008545892         T     20081218    JP 2008-513448
                                                                   2005
                                                                   1223
                                                 <--
     MX 2007014703         A     20080214    MX 2007-14703
                                                                   2007
                                                                   1123
                                                 <--
```

KR 2008047510	A	20080529	KR 2007-730060	2007 1224 <--
CN 101228317	A	20080723	CN 2005-80051168	2008 0124 <--
PRIORITY APPLN. INFO.:			US 2005-684816P	P 2005 0526 <--
			US 2005-313504	A 2005 1221 <--
			WO 2005-US46946	W 2005 1223 <--

ED Entered STN: 01 Dec 2006

AB A method of improving retention and drainage in a papermaking process comprises adding a water-compatible hydrophobic copolymer to a papermaking slurry. A water-compatible hydrophobic copolymer contains ≥1 hydrophobic monomer such as lauryl acrylate and octylacrylamide.

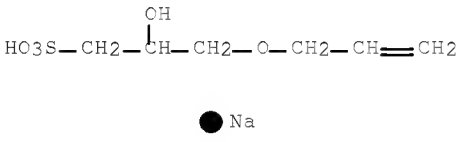
IT 97851-31-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(hydrophobic polymers used in preparing cellulosic fiber compns.)

RN 97851-31-5 HCAPLUS

CN 2-Propenoic acid, polymer with 2-propenamide and sodium 2-hydroxy-3-(2-propen-1-yloxy)-1-propanesulfonate (1:1) (CA INDEX NAME)

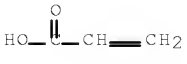
CM 1

CRN 52556-42-0
CMF C6 H12 O5 S . Na



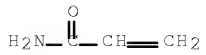
CM 2

CRN 79-10-7
CMF C3 H4 O2



CM 3

CRN 79-06-1
CMF C3 H5 N O



CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 37
ST hydrophobic polymer improving retention drainage papermaking
IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, graft; hydrophobic polymers used in preparing cellulosic fiber compns.)
IT Fibers
RL: TEM (Technical or engineered material use); USES (Uses)
(cellulosic; hydrophobic polymers used in preparing cellulosic fiber compns.)
IT Paper
(hydrophobic polymers used in preparing cellulosic fiber compns.)
IT 97851-31-5P 190272-97-0P, Acrylamide-acrylic acid-tert-octylacrylamide copolymer 915379-74-7P 915379-75-8P 915414-16-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(hydrophobic polymers used in preparing cellulosic fiber compns.)
IT 25119-83-9, Acrylic acid-butyl acrylate copolymer 25189-55-3, Poly(N-isopropylacrylamide) 26793-34-0, Poly(N,N-dimethylacrylamide) 105053-72-3, Acrysol TT 935 915414-15-2, PerForm 9232
RL: TEM (Technical or engineered material use); USES (Uses)
(hydrophobic polymers used in preparing cellulosic fiber compns.)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:51238 HCAPLUS Full-text
DOCUMENT NUMBER: 144:110055
TITLE: Cleaners for paper making process and cleaning of paper-making felts
INVENTOR(S): Kihata, Kenji; Wada, Satoshi
PATENT ASSIGNEE(S): Kurita Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006016737	A	20060119	JP 2004-197674 <--	20040705
CN 1721622	A	20060118	CN 2005-10082017	

2005
0704
<--

PRIORITY APPLN. INFO.: JP 2004-197674 A
2004
0705
<--

ED Entered STN: 19 Jan 2006

AB The cleaners comprise H2O-soluble polymers and aliphatic amines or their derivs. and are added to shower water in cleaning of the felts. Thus, 5.0 mg Na polyacrylate and 5.0 mg polyoxyethylene stearylamine (Blaunon S 215) were added to 1 L H2O containing 200 mg light CaCO3, stirred for 15 min, and applied to a paper-making felt to result in adhesion of CaCO3 to the felt <1 mg.

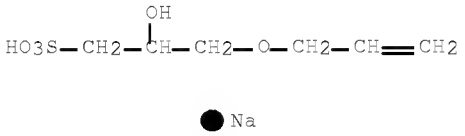
IT 88794-99-4, Sodium acrylate-sodium 2-hydroxy-3-allyloxy-1-propanesulfonate copolymer
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(cleaning of paper-making felts by using water-soluble polymers and aliphatic amines)

RN 88794-99-4 HCAPLUS

CN 2-Propenoic acid, sodium salt (1:1), polymer with sodium 2-hydroxy-3-(2-propen-1-yloxy)-1-propanesulfonate (1:1) (CA INDEX NAME)

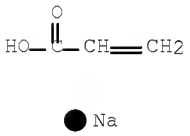
CM 1

CRN 52556-42-0
CMF C6 H12 O5 S . Na



CM 2

CRN 7446-81-3
CMF C3 H4 O2 . Na



CC 43-10 (Cellulose, Lignin, Paper, and Other Wood Products)

IT Polyelectrolytes
(anionic; cleaning of paper-making felts by using water-soluble polymers and aliphatic amines)

IT 9003-04-7, Sodium polyacrylate 37350-42-8, Sodium acrylate-sodium 2-acrylamido-2-methylpropanesulfonate copolymer 51025-75-3, Sodium acrylate-sodium maleate copolymer 88794-99-4, Sodium acrylate-sodium 2-hydroxy-3-allyloxy-1-propanesulfonate copolymer

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(cleaning of paper-making felts by using water-soluble polymers and aliphatic amines)

L125 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1220671 HCAPLUS Full-text
DOCUMENT NUMBER: 143:461990
TITLE: New composition and treatment of fiber material prior to bleaching
INVENTOR(S): Paren, Aarto; Ahlgren, Jonni; Jaekaerae, Jukka; Renvall, Ilkka; Rautiainen, Jukka
PATENT ASSIGNEE(S): Kemira Oyj, Finland
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

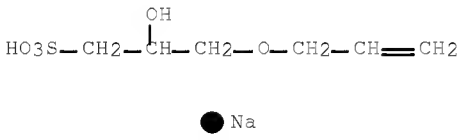
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005108673	A1	20051117	WO 2005-FI211	20050510
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
FI 2004000673	A	20051113	FI 2004-673	20040512
			<--	
CA 2564015	A1	20051117	CA 2005-2564015	20050510
			<--	
EP 1751347	A1	20070214	EP 2005-739491	20050510
			<--	
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1957138	A	20070502	CN 2005-80014915	20050510
			<--	
BR 2005011039	A	20071127	BR 2005-11039	20050510
			<--	
US 20080264584	A1	20081030	US 2008-596140	20080626
			<--	

PRIORITY APPLN. INFO.: FI 2004-673 A 20040512 <--
WO 2005-FI211 W 20050510 <--

OTHER SOURCE(S): MARPAT 143:461990
ED Entered STN: 18 Nov 2005
AB The stabilizing composition comprises (A) acrylate copolymer having substituents R1 = H or C1-12-alkyl; R2 = CO2M or CH2CO2M; M = H, an alkali metal ion, an alkaline earth metal ion, ammonium ion or a mixture; n, m and k are molar ratios of corresponding monomers, where n = 0-0.95, m = 0.05-0.9, k = 0-0.8, (n + m + k) = 1, and weight-average mol. weight 500-20,000,000 g/mol, (B) a chelating agent, and (C) an alkaline earth metal compound
IT 78266-09-8P, Acrylic acid-sodium 3-allyloxy-2-hydroxypropanesulfonate copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
((allyloxy)hydroxypropanesulfonic acid copolymer salt/chelating agent/alkaline earth metal composition and treatment of cellulose pulp)
RN 78266-09-8 HCAPLUS
CN 2-Propenoic acid, polymer with sodium 2-hydroxy-3-(2-propen-1-yloxy)-1-propanesulfonate (1:1) (CA INDEX NAME)

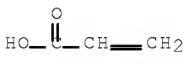
CM 1

CRN 52556-42-0
CMF C6 H12 O5 S . Na

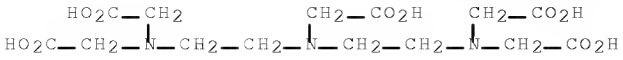


CM 2

CRN 79-10-7
CMF C3 H4 O2



IT 67-43-6
RL: MOA (Modifier or additive use); USES (Uses)
((allyloxy)hydroxypropanesulfonic acid copolymer salt/chelating agent/alkaline earth metal composition and treatment of cellulose pulp)
RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (CA INDEX NAME)



IC ICM D21C009-16
ICS D21C009-10; D21C005-02
CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
ST cellulose pulp pretreatment
stabilizer copolymer salt chelating agent;
paper deinking pretreatment stabilizer
copolymer
IT Bleaching
Cellulose pulp
Chelating agents
Stabilizing agents
((allyloxy)hydroxypropanesulfonic acid copolymer
salt/chelating agent/alkaline earth metal composition and
treatment of cellulose pulp)
IT Alkaline earth salts
RL: MOA (Modifier or additive use); USES (Uses)
((allyloxy)hydroxypropanesulfonic acid copolymer
salt/chelating agent/alkaline earth metal composition and
treatment of cellulose pulp)
IT 78266-09-8P, Acrylic acid-sodium
3-allyloxy-2-hydroxypropanesulfonate copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
PREP (Preparation); USES (Uses)
((allyloxy)hydroxypropanesulfonic acid copolymer
salt/chelating agent/alkaline earth metal composition and
treatment of cellulose pulp)
IT 62-54-4, Calcium acetate 67-43-6 140-01-2 142-72-3,
Magnesium acetate 7408-20-0, Iminodisuccinic acid 7487-88-9,
Magnesium sulfate, uses 7786-30-3, Magnesium chloride, uses
10043-52-4, Calcium chloride, uses 15827-60-8 199874-60-7
RL: MOA (Modifier or additive use); USES (Uses)
((allyloxy)hydroxypropanesulfonic acid copolymer
salt/chelating agent/alkaline earth metal composition and
treatment of cellulose pulp)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L125 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1074375 HCAPLUS Full-text
DOCUMENT NUMBER: 143:368958
TITLE: Pitch control method in the manufacture of paper and pulp
INVENTOR(S): Suzuki, Hiroyuki
PATENT ASSIGNEE(S): Kurita Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005273048	A	20051006	JP 2004-85660	2004 0323

<--
PRIORITY APPLN. INFO.: JP 2004-85660

2004
0323

<--

ED Entered STN: 07 Oct 2005

AB The method for a papermaking system with a paper stock containing suspended particles and/or white water features an additive containing an anionic water-soluble polymer or its salt and/or polyvinylpyrrolidone with mol. weight 1000-2,000,000, where the anionic water-soluble polymer is selected from (a) unsatd. carboxylic acid-2-acrylamido-2-methylpropanesulfonic acid copolymer, (b) unsatd. carboxylic acid- 3-allylloxy-2-hydroxypropanesulfonic acid, and (c) polystyrenesulfonic acid. Polystreyenesulfonate Na salt was effective in preventing flocculation and agglomeration of Ca salts in a color coating liquid

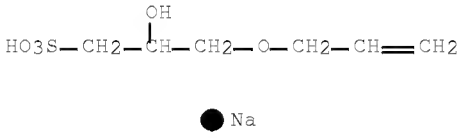
IT 88794-99-4, Sodium acrylate-sodium 3-allyloxy-2-Hydroxypropanesulfonate copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(pitch control method in the manufacture of paper and pulp)

RN 88794-99-4 HCAPLUS

CN 2-Propenoic acid, sodium salt (1:1), polymer with sodium 2-hydroxy-3-(2-propen-1-yloxy)-1-propanesulfonate (1:1) (CA INDEX NAME)

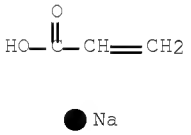
CM 1

CRN 52556-42-0
CMF C6 H12 O5 S . Na



CM 2

CRN 7446-81-3
CMF C3 H4 O2 . Na



IC ICM D21H021-02

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

IT Paper
Polyelectrolytes
(pitch control method in the manufacture of paper and pulp)

IT 9003-39-8, Polyvinylpyrrolidone 9003-53-6D, sulfonated, sodium salt 37350-42-8, Sodium acrylate-sodium 2-Acrylamido-2-methylpropanesulfonate copolymer 88794-99-4, Sodium acrylate-sodium 3-allyloxy-2-Hydroxypropanesulfonate copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(pitch control method in the manufacture of paper and pulp)

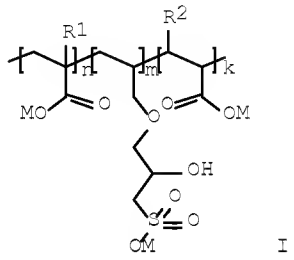
L125 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:962453 HCAPLUS Full-text
DOCUMENT NUMBER: 143:249962
TITLE: Composition and process for treatment of fiber material prior to pulp bleaching
INVENTOR(S): Lee, Seung-Hoon; Ahlgren, Jonni; Jaekaerae, Jukka; Paren, Aarto; Rautiainen, Jukka; Renvall, Ilkka
PATENT ASSIGNEE(S): Kemira Oyj, Finland
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005080673	A2	20050901	WO 2005-FI113	20050223
WO 2005080673	A3	20051110		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
FI 2004000293	A	20050826	FI 2004-293	20040225
CA 2554056	A1	20050901	CA 2005-2554056	20050223
EP 1730348	A2	20061213	EP 2005-717240	20050223
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1922360	A	20070228	CN 2005-80006084	20050223
BR 2005007853	A	20070710	BR 2005-7853	20050223
US 20080035287	A1	20080214	US 2007-587564	20070613

PRIORITY APPLN. INFO.: FI 2004-293 A 20040225

<--
WO 2005-FI113 W
2005
0223
<--

OTHER SOURCE(S): MARPAT 143:249962
ED Entered STN: 02 Sep 2005
GI

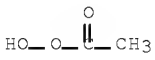


I

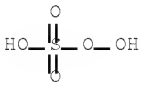
AB The process comprises the steps of: contacting the fiber material in an aqueous medium with a chelating agent and a polymer having general formula I wherein R1 is a H atom or a C1-12 alkyl group; R2 is -COOM or -CH2COOM; M is a H atom, an alkali metal ion, an alkaline earth metal ion, an ammonium ion or a mixture thereof; n, m and k are molar ratios of corresponding monomers, wherein n is 0 to 0.95, m is 0.05 to 0.9, and k is 0 to 0.8, and (n+m+k) equals 1, and the weight-average mol. weight is between 500 and 20,000,000 g/mol. The invention also relates to a composition comprising a chelating agent and the above polymer.

IT 79-21-0, Peracetic acid
7722-86-3, Caro's acid
RL: NUU (Other use, unclassified); USES (Uses)
(bleaching agent; composition and process for treatment of fiber material prior to pulp bleaching with peroxide)

RN 79-21-0 HCAPLUS
CN Ethaneperoxoic acid (CA INDEX NAME)



RN 7722-86-3 HCAPLUS
CN Peroxymonosulfuric acid (CA INDEX NAME)

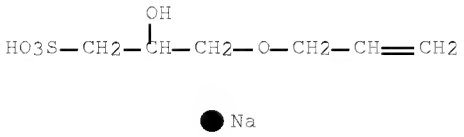


IT 78266-09-8P, Acrylic acid-sodium 3-allyloxy-2-hydroxypropane sulfonate copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(composition and process for treatment of fiber material prior to pulp

bleaching with peroxide)
RN 78266-09-8 HCAPLUS
CN 2-Propenoic acid, polymer with sodium 2-hydroxy-3-(2-propen-1-yloxy)-1-propanesulfonate (1:1) (CA INDEX NAME)

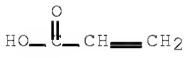
CM 1

CRN 52556-42-0
CMF C6 H12 O5 S . Na

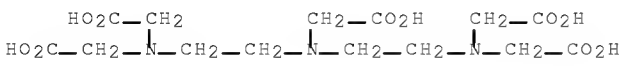


CM 2

CRN 79-10-7
CMF C3 H4 O2



IT 67-43-6, DTPA
RL: MOA (Modifier or additive use); USES (Uses)
(composition and process for treatment of fiber material prior to pulp bleaching with peroxide)
RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (CA INDEX NAME)



IT 7722-84-1, Hydrogen peroxide, uses
RL: NUU (Other use, unclassified); USES (Uses)
(composition and process for treatment of fiber material prior to pulp bleaching with peroxide)
RN 7722-84-1 HCAPLUS
CN Hydrogen peroxide (H2O2) (CA INDEX NAME)

IC ICM D21C009-10

ICS D21C009-16
CC 43-6 (Cellulose, Lignin, Paper, and Other Wood Products)
ST pulp bleaching acrylic sulfonate copolymer chelating agent peroxide stabilizing; metal ion scavenging polymer chelating agent pulp bleaching; allyloxy hydroxypropanesulfonate copolymer chelating agent pulp bleaching
IT Chelating agents
Pulp bleaching
(composition and process for treatment of fiber material prior to pulp bleaching with peroxide)
IT 79-21-0, Peracetic acid
7722-86-3, Caro's acid
RL: NUU (Other use, unclassified); USES (Uses)
(bleaching agent; composition and process for treatment of fiber material prior to pulp bleaching with peroxide)
IT 78266-09-8P, Acrylic acid-sodium 3-allyloxy-2-hydroxypropane sulfonate copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(composition and process for treatment of fiber material prior to pulp bleaching with peroxide)
IT 67-43-6, DTPA 15827-60-8, Diethylenetriamine pentamethylene phosphonic acid
RL: MOA (Modifier or additive use); USES (Uses)
(composition and process for treatment of fiber material prior to pulp bleaching with peroxide)
IT 7722-84-1, Hydrogen peroxide, uses
RL: NUU (Other use, unclassified); USES (Uses)
(composition and process for treatment of fiber material prior to pulp bleaching with peroxide)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:931094 HCAPLUS Full-text
DOCUMENT NUMBER: 139:392516
TITLE: Composition for preventing the occurrence of slime in industries
INVENTOR(S): Tsuneki, Takao; Nagai, Naohiro; Morita, Akira; Uchida, Takahiko
PATENT ASSIGNEE(S): Kurita Water Industries Ltd., Japan
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003096810	A1	20031127	WO 2003-JP6366	2003 0521
			<--	
W: BR, CN, ID, JP, KR, MX, SG, US				
RW: CZ, DE, ES, FR, GB, IT, NL, PT, SK				
BR 2003004877	A	20040803	BR 2003-4877	2003

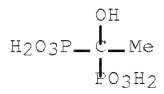
0521
<--
EP 1550369 A1 20050706 EP 2003-730556
2003
0521
<--
EP 1550369 B1 20080702
R: DE, ES, FR, GB, IT, NL, PT, CZ, SK
CN 1655676 A 20050817 CN 2003-811666
2003
0521
<--
MX 2004011256 A 20050217 MX 2004-11256
2004
1112
<--
US 20060054563 A1 20060316 US 2004-515072
2004
1117
<--
US 7285221 B2 20071023
PRIORITY APPLN. INFO.: JP 2002-148123 A
2002
0522
<--
WO 2003-JP6366 W
2003
0521
<--

ED Entered STN: 28 Nov 2003

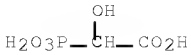
AB A composition for preventing a slime, is characterized in that it comprises a chlorine-containing oxidizing agent, a sulfamic acid based compound, and an anionic polymer or phosphonic acid based compound; and a method for preventing a slime, is characterized in that it comprises adding the composition to a water containing the slime. The composition for the prevention of a slime can be used for effectively preventing a trouble, resulting from a slime by the use of a small amount of a chemical, for example, in a cooling water system, a heat generating system, a paper pulping process water system, a dust collecting water system, and a scrubber water system. The preventing agents are chlorine oxides, sulfaminic compds., anionic polymers and phosphonic acid compds.

IT 2809-21-4, 1-Hydroxy-ethylidene-1,1-di-phosphonic acid
23783-26-8, Hydroxy-phosphono-acetic acid
37971-36-1, 2-Phosphono-butane-1,2,4-tricarboxylic acid
105062-71-3, Acrylic acid-2-hydroxy-3-allyloxypropanesulfonic acid copolymer
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(in antimicrobial composition for preventing occurrence of slime in industries)

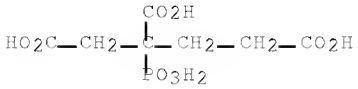
RN 2809-21-4 HCAPLUS
CN Phosphonic acid, P,P'-(1-hydroxyethylidene)bis- (CA INDEX NAME)



RN 23783-26-8 HCAPLUS
CN Acetic acid, 2-hydroxy-2-phosphono- (CA INDEX NAME)



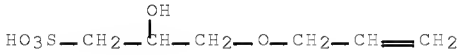
RN 37971-36-1 HCAPLUS
CN 1,2,4-Butanetricarboxylic acid, 2-phosphono- (CA INDEX NAME)



RN 105062-71-3 HCAPLUS
CN 2-Propenoic acid, polymer with
2-hydroxy-3-(2-propen-1-yloxy)-1-propanesulfonic acid (CA INDEX
NAME)

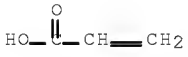
CM 1

CRN 94928-31-1
CMF C6 H12 O5 S



CM 2

CRN 79-10-7
CMF C3 H4 O2



IC ICM A01N041-08
ICS A01N057-20; A01N059-00; A01N059-08; A01N061-00; C02F001-50;
C02F001-54; C02F005-10
CC 5-2 (Agrochemical Bioregulators)
Section cross-reference(s): 38, 43
ST slime control chlorine oxide industry paper metal
processing system
IT Polyelectrolytes
(anionic; in antimicrobial composition for preventing occurrence of
slime in industries)
IT Paper
(antimicrobial composition for preventing occurrence of slime in
paper industries)
IT Polymers, processes
RL: BCP (Biochemical process); BIOL (Biological study); PROC
(Process)
(in antimicrobial composition for preventing occurrence of slime in
industries)

IT Alkali metal salts
Alkaline earth salts
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(with anionic polymers; in antimicrobial composition for preventing occurrence of slime in industries)
IT 1310-73-2, Sodium hydroxide, processes 1429-50-1 2809-21-4, 1-Hydroxy-ethylidene-1,1-di-phosphonic acid 3345-86-6 4112-03-2D, salts, with alkali metals 5329-14-6, Sulfaminic acid 5329-14-6D, Sulfaminic acid, derivs. 6419-19-8, Nitrilotrimethylene-phosphonic acid 6623-40-1 7647-01-0D, Hydrochloric acid, salts, with alkali metals 7681-52-9, Sodium hypochlorite 7782-50-5D, Chlorine, derivs. 7790-92-3D, Hypochlorous acid, salts, with alkali metals 9003-01-4, Acrylic acid polymer 13598-36-2D, Phosphonic acid, derivs. 13898-47-0D, Chlorous acid, salts, with alkali metals 23783-26-8, Hydroxy-phosphono-acetic acid 26099-09-2, Maleic acid polymer 27175-46-8, Acrylic acid-2-hydroxyethyl methacrylate copolymer 37971-36-1, 2-Phosphono-butane-1,2,4-tricarboxylic acid 40623-75-4, Acrylic acid-2-acrylamido-2-methylpropanesulfonic acid copolymer 80267-65-8, Maleic acid-pentene copolymer 105062-71-3, Acrylic acid-2-hydroxy-3-allyloxypropanesulfonic acid copolymer 626243-83-2
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(in antimicrobial composition for preventing occurrence of slime in industries)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:107320 HCAPLUS Full-text
DOCUMENT NUMBER: 126:119374
ORIGINAL REFERENCE NO.: 126:23029a,23032a
TITLE: Unsaturated polycarboxylate salts and their polymers with good chelating properties
INVENTOR(S): Yamaguchi, Shigeru; Tuboi, Keisi
PATENT ASSIGNEE(S): Nippon Shokubai Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 747343	A1	19961211	EP 1996-304256	19960607
			<--	
EP 747343	B1	19990506		
R: DE, FR, GB				
JP 08333301	A	19961217	JP 1995-143740	19950609
			<--	
JP 09052915	A	19970225	JP 1996-132227	19960527
			<--	
JP 3739483	B2	20060125		

US 5859286	A	19990112	US 1996-659907	1996 0607 <--
US 6107428	A	20000822	US 1998-176927	1998 1023 <--
PRIORITY APPLN. INFO.:			JP 1995-143740	A 1995 0609 <--
			JP 1995-143742	A 1995 0609 <--
			JP 1996-132227	A 1996 0527 <--
			US 1996-659907	A3 1996 0607 <--

ED Entered STN: 15 Feb 1997

AB R1CH:CR2CO2CR3(CO2R4)CHR3CO2R4 [I, R1 = H, OH, CO2R5, or CO2CR3(CO2R4)CHR3CO2R4, R2 = H, Me, or CH2COOR4, R3 = H, OH, or CH2COOR4, R4 = H, Na, K, or NH4, R5 = Na, K, NH4] are manufacture by reaction of an ethylenically unsatd. carboxylic compound with a OH-containing polycarboxylic acid, with subsequent salt formation. I yield polymers having excellent chelating properties and biodegradability making them useful in detergents and as inorg.-pigment dispersing agents, water-treatment agents, and bleaching assistants for pulp.

IT 185963-08-0P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability)

RN 185963-08-0 HCAPLUS

CN 1,2,3-Propanetricarboxylic acid, 2-[(3-carboxy-1-oxo-2-propenyl)oxy]-, (Z)-, polymer with 2,5-furandione and 2-hydroxy-3-(2-propenyloxy)-1-propanesulfonic acid monosodium salt, sodium salt (9CI) (CA INDEX NAME)

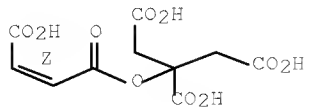
CM 1

CRN 185963-07-9
CMF (C10 H10 O10 . C6 H12 O5 S . C4 H2 O3 . Na)x
CCI PMS

CM 2

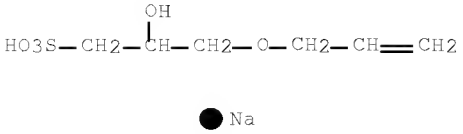
CRN 54262-12-3
CMF C10 H10 O10

Double bond geometry as shown.



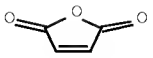
CM 3

CRN 52556-42-0
CMF C6 H12 O5 S . Na



CM 4

CRN 108-31-6
CMF C4 H2 O3



IC ICM C07C069-675
ICS C07C067-00; C08F022-16; C11D003-37
CC 46-4 (Surface Active Agents and Detergents)
Section cross-reference(s): 35, 40, 42, 43
ST unsatd polycarboxylate salt manuf polymn; pulp bleaching assistant polycarboxylate salt polymer ; water treatment agent polycarboxylate salt polymer; inorg pigment dispersant polycarboxylate salt polymer; detergent biodegradable chelating agent; polyelectrolyte biodegradable chelating agent
IT Cellulose pulp
(assistants for bleaching of; unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability for)
IT Bleaching
(assistants for, of pulp; unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability for)
IT Pigments, nonbiological
(dispersants for; unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability for)
IT Fibers
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(treatments for; unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability for)
IT Biodegradable materials
Chelating agents
Polyelectrolytes
(unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability)
IT Water purification
(unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability for)
IT Detergents
(use; unsatd. polycarboxylate salts and their polymers

with good chelating properties and biodegradability)
IT 77-92-9, Citric acid, reactions 87-69-4, reactions 96-33-3, Methyl acrylate 108-31-6, 2,5-Furandione, reactions 6915-15-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(monomer precursor; unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability)
IT 185963-03-5P 185963-04-6P 185963-06-8P 185963-08-0P
185963-10-4P 185963-13-7P 185963-15-9P 186142-22-3P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability)
IT 54262-13-4P 54262-15-6P 185963-00-2P 185963-01-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(unsatd. polycarboxylate salts and their polymers with good chelating properties and biodegradability)

L125 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:379801 HCAPLUS Full-text
DOCUMENT NUMBER: 125:41380
ORIGINAL REFERENCE NO.: 125:7865a,7868a
TITLE: Polyether polyamino methylene phosphonates for high pH scale control
INVENTOR(S): Iman, Craig D.; Tomilson, Robert E.
PATENT ASSIGNEE(S): Calgon Corporation, USA
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 711733	A1	19960515	EP 1995-308007	1995 1109 <--
EP 711733	B1	19990825		
R: BE, DE, ES, FR, GB, IT, NL, SE				
US 5534157	A	19960709	US 1994-338016	1994 1110 <--
CA 2162518	A1	19960511	CA 1995-2162518	1995 1109 <--
CA 2162518	C	20080422		
ES 2138153	T3	20000101	ES 1995-308007	1995 1109 <--
FI 9505431	A	19960511	FI 1995-5431	1995 1110 <--
FI 119930	B1	20090515		
JP 08224595	A	19960903	JP 1995-292516	1995 1110 <--

PRIORITY APPLN. INFO.: US 1994-338016 A 1994

1110

<--

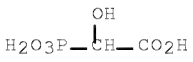
ED Entered STN: 02 Jul 1996

AB A method for treating an aqueous system of a paper and/or pulp mill to control the formation, deposition and adherence of scale imparting compds. including calcium sulfite in an aqueous system, includes the step of adding to the system a deposit control agent comprising a polyether polyamino phosphonate of the formula (MO2O3PCH2)NCHRCH2(OCH2CHR)nN(CH2PO3M2) (R = H or Me; M = H or a suitable cation; n = 2-12). Optional additives may be included in the composition A water treatment system in which such a method is employed is also described. The system may be a pulp mill lime kiln flue gas scrubber system or a multi-effect evaporator. The composition is effective at high pH and high calcium sulfite saturation levels in such a system.

IT 23783-26-8, Hydroxyphosphonoacetic acid 78266-09-8 , Aquatreat CPA-III
RL: NUU (Other use, unclassified); USES (Uses)
(polyether polyamino methylene phosphonates for high pH scale control)

RN 23783-26-8 HCAPLUS

CN Acetic acid, 2-hydroxy-2-phosphono- (CA INDEX NAME)

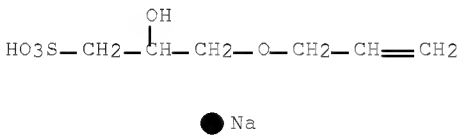


RN 78266-09-8 HCAPLUS

CN 2-Propenoic acid, polymer with sodium 2-hydroxy-3-(2-propen-1-yloxy)-1-propanesulfonate (1:1) (CA INDEX NAME)

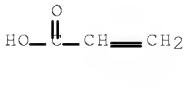
CM 1

CRN 52556-42-0
CMF C6 H12 O5 S . Na



CM 2

CRN 79-10-7
CMF C3 H4 O2



IC ICM C02F005-14

CC 61-8 (Water)
Section cross-reference(s): 43, 59

IT 9003-01-4, Polyacrylic acid 9003-06-9, Acrylamide-acrylic acid copolymer 9003-11-6D, Ethylene oxide-propylene oxide

copolymer, amine derivs., phosphonated 23783-26-8
, Hydroxyphosphonoacetic acid 29385-43-1, Tolyltriazole
40623-75-4 78266-09-8, Aquatreat CPA-III 97384-95-7
107375-34-8 107532-52-5 130668-24-5 152444-11-6, Versa TL-7
RL: NUU (Other use, unclassified); USES (Uses)
(polyether polyamino methylene phosphonates for high pH scale control)

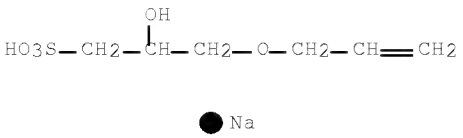
L125 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:580559 HCAPLUS Full-text
DOCUMENT NUMBER: 122:317265
ORIGINAL REFERENCE NO.: 122:57661a,57664a
TITLE: Anionic sulfonated thickening compositions and their uses
INVENTOR(S): Yeh, Michael H.
PATENT ASSIGNEE(S): Rhone-Poulenc Specialty Chemicals Co., USA
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 632057	A1	19950104	EP 1994-304634	1994 0627
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CA 2125452	A1	19950102	CA 1994-2125452	1994 0608
			<--	
PRIORITY APPLN. INFO.:			US 1993-87635 A	1993 0701
			<--	

ED Entered STN: 01 Jun 1995
AB Title compns. comprise an anionic hydroxy-containing polymer which is partially or completely substituted by ≥1 sulfonate groups derived from an ethylenically unsatd. monomer. The composition is capable of producing enhanced viscosities, either when used alone or when combined with a cationic polymer and distributed in a solvent. It is suitable for use in foods, explosives, oil-field chems., textile fibers, paper products, personal care products, agricultural chems., and cosmetics. Thus, 2-acrylamido-2-methylpropanesulfonic acid was reacted with NaOH to yield Na 2-acrylamido-2-methylpropanesulfonate monomer, which was reacted with the polygalactomannan of guar gum to give a thickening agent.
IT 163447-64-1P
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(anionic sulfonated thickening compns. from hydroxy-containing polymers and ethylenically unsatd. monomers)
RN 163447-64-1 HCAPLUS
CN Guar gum, polymer with 2-hydroxy-3-(2-propenyloxy)-1-propanesulfonic acid monosodium salt, graft (9CI) (CA INDEX NAME)

CM 1

CRN 52556-42-0
CMF C6 H12 O5 S . Na



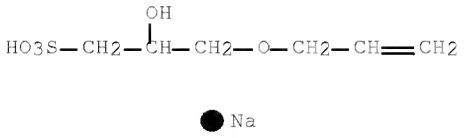
```
     CM   2

     CRN  9000-30-0
     CMF  Unspecified
     CCI  PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC   ICM  C08B037-14
     ICS  C08F008-34; C08L005-14
CC   44-6 (Industrial Carbohydrates)
     Section cross-reference(s): 43
IT   Thickening agents
        (anionic sulfonated thickening compns. from hydroxy-containing
        polymers and ethylenically unsatd. monomers)
IT   Polysaccharides, preparation
     RL: IMF (Industrial manufacture); NUU (Other use, unclassified);
     PREP (Preparation); USES (Uses)
        (esters, anionic sulfonated thickening compns. from
        hydroxy-containing polymers and ethylenically unsatd.
        monomers)
IT   163447-63-0P 163447-64-1P   163447-65-2P   163578-92-5P
     RL: IMF (Industrial manufacture); NUU (Other use, unclassified);
     PREP (Preparation); USES (Uses)
        (anionic sulfonated thickening compns. from hydroxy-containing
        polymers and ethylenically unsatd. monomers)

L125 ANSWER 10 OF 10  HCAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:        1995:331701  HCAPLUS  Full-text
DOCUMENT NUMBER:         123:59359
ORIGINAL REFERENCE NO.:  123:10615a,10618a
TITLE:                   Amphoteric blends of polysaccharides with
                         enhanced viscosity of their solutions
INVENTOR(S):             Yeh, Michael H.
PATENT ASSIGNEE(S):      Rhone-Poulenc Specialty Chemicals Co., USA
SOURCE:                  U.S., 8 pp.
                         CODEN: USXXAM
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ----------------    ----   --------    --------------------
     --------
     US 5378830           A     19950103    US 1993-115180
                                                                   1993
                                                                   0901
                                             <--
PRIORITY APPLN. INFO.:                       US 1993-115180
                                                                   1993
                                                                   0901
                                             <--
ED   Entered STN:  04 Feb 1995
AB   A title blend comprises ≥1 cationic and ≥1 anionic polysaccharide, preferably
     galactomannan, where anionic polysaccharide contains ≥1 sulfonic groups.  Aqueous
     solns. of such blends, suitable for use in foods, explosives, oil field chems., textile
```

fibers, paper production, personal care products, agricultural chems. and cosmetics (no data), produce viscosities higher than the sep. anionic and cationic polysaccharide. For example, a 1% aqueous solution of an anionic sulfonated guar (preparation from guar gum and Na 2-acrylamido-2-methylpropanesulfonate given) had the Brookfield viscosity (measured at 20 rpm 2 h after hydration) of 4500 cP. Similarly, the viscosity of 1% aqueous solution of Jaguar C-14 was 5600 cP, but a 50:50 blend of the 2 above solns. had viscosity 7600 cP.

IT 52556-42-0P, reaction products with guar gum
RL: IMF (Industrial manufacture); PREP (Preparation)
(amphoteric blends of polysaccharides with enhanced viscosity of their solns.)

RN 52556-42-0 HCAPLUS

CN 1-Propanesulfonic acid, 2-hydroxy-3-(2-propen-1-yloxy)-, sodium salt (1:1) (CA INDEX NAME)



IC ICM C07H011-00
ICS C07H013-12

INCL 536118000

CC 44-7 (Industrial Carbohydrates)
Section cross-reference(s): 17, 40, 43, 50, 62

IT Paper
(chems. for manufacture of, containing blends of cationic and anionic polysaccharides; amphoteric blends of polysaccharides with enhanced viscosity of their solns.)

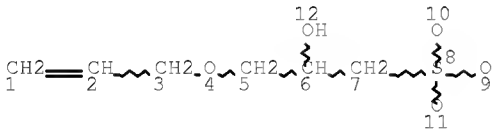
IT Synthetic fibers
RL: MSC (Miscellaneous)
(chems. for manufacture of, containing blends of cationic and anionic polysaccharides; amphoteric blends of polysaccharides with enhanced viscosity of their solns.)

IT 52556-42-0P, reaction products with guar gum
RL: IMF (Industrial manufacture); PREP (Preparation)
(amphoteric blends of polysaccharides with enhanced viscosity of their solns.)

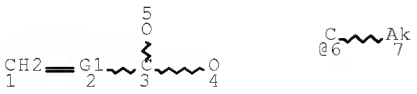
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

STRUCTURE SEARCH

```
=> => d his l150

     (FILE 'HCAPLUS' ENTERED AT 16:12:38 ON 23 JUL 2009)
L150           8 S L148 OR L149
                 SAV TEMP L125 MIN564HCP/A
                 SAV TEMP L150 MIN564HCPA/A

=> d que stat l150
L1             1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  US20080035287/
                 PN
L3             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  MALEIC
                 ACID/CN
L4         32238 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  110-16-7/CRN

L5             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  ITACONIC
                 ACID/CN
L6          6171 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  97-65-4/CRN
L7             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  ACRYLIC
                 ACID/CN
L8         69687 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  79-10-7/CRN
L9             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  METHACRYLIC
                 ACID/CN
L10        54330 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  79-41-4/CRN
L11       152885 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (L3 OR L4 OR
                 L5 OR L6 OR L7 OR L8 OR L9 OR L10)
L12              STR
```

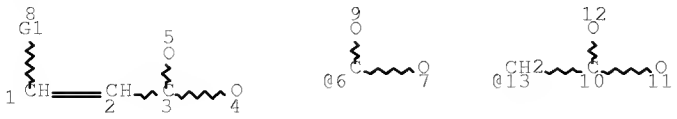



```
NODE ATTRIBUTES:
CONNECT IS E1  RC AT   9
CONNECT IS E1  RC AT  10
CONNECT IS E1  RC AT  11
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  12

STEREO ATTRIBUTES: NONE
L14          213 SEA FILE=REGISTRY SSS FUL L12
L16          135 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L14 AND L11
L17              STR
```

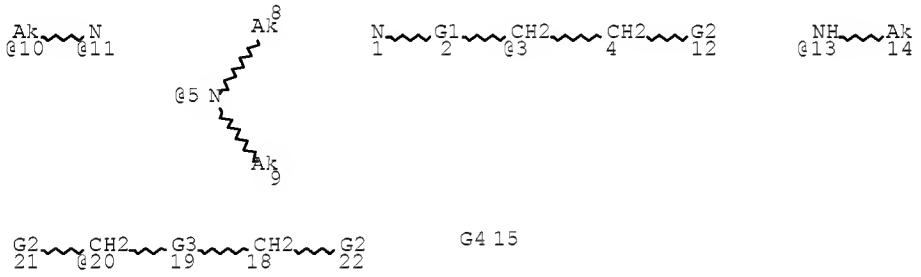



```
VAR G1=CH/6
NODE ATTRIBUTES:
CONNECT IS M1  RC AT   4
CONNECT IS E1  RC AT   5
CONNECT IS E1  RC AT   7
DEFAULT MLEVEL IS ATOM
```

```
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X12 C  AT   7

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   7

STEREO ATTRIBUTES: NONE
L18             STR
```

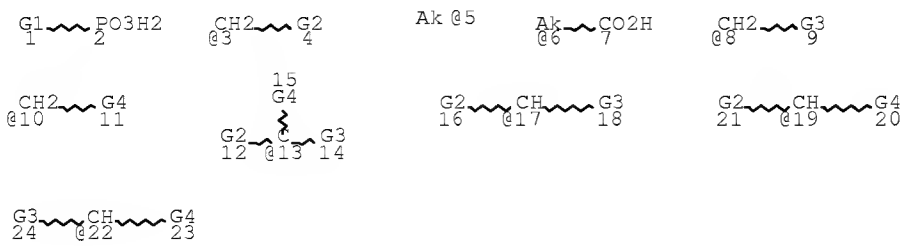


```
VAR G1=6/13
NODE ATTRIBUTES:
CONNECT IS M1  RC AT   4
CONNECT IS E1  RC AT   5
CONNECT IS E1  RC AT   7
CONNECT IS E1  RC AT   9
CONNECT IS E1  RC AT  11
CONNECT IS E1  RC AT  12
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L20         175 SEA FILE=REGISTRY SUB=L14 SSS FUL L17 OR L18
L22          13 SEA FILE=REGISTRY SUB=L14 SSS FUL L17 AND L12 AND L18
L23         175 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L20 OR L22
L24             STR
```



```
REP G1=(0-10) 10-1 11-3
VAR G2=NH2/13/5
REP G3=(1-8) CH2
VAR G4=3/20
NODE ATTRIBUTES:
CONNECT IS E2  RC AT  10
DEFAULT MLEVEL IS ATOM
GGCAT   IS LIN  SAT  AT  10
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E2 C  AT  10

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  18
```

```
STEREO ATTRIBUTES: NONE
L26             SCR 1918 OR 1838 OR 1929 OR 2003 OR 1925 OR 1983 OR 2019
 OR 1925
L28         6807 SEA FILE=REGISTRY SSS FUL L24 NOT L26
L32              STR
```




```
VAR G1=CH3/3/8/10/13/17/19/22
VAR G2=OH/5/6/CO2H
VAR G3=OH/5/6/CO2H/PO3H2
VAR G4=OH/5/6/PO3H2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X6 C  AT   5
ECOUNT  IS M1-X6 C  AT   6

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  24

STEREO ATTRIBUTES: NONE
L34        16568 SEA FILE=REGISTRY SSS FUL L32
L35            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  7722-84-1/RN

L36            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  7722-86-3/RN

L37            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  79-21-0/RN
L38            3 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (L35 OR L36
                 OR L37)
L42          175 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L16
L43          201 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L23
L44          285 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L14
L45       103950 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L28
L46        28082 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L34
L47       125122 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L38
L48           42 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND (L45
                 OR L46)
L50              SEL  PLU=ON  L38 1- NAME :      90 TERMS
L51       150692 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L50
L52            1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L48 AND L51
L53       376956 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  ?PEROXIDE? OR
                 ?PEROXYGEN?
L54            2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L48 AND L53
L57              QUE  SPE=ON  ABB=ON  PLU=ON  TREAT? OR PRETREAT? OR CON
                 DITION? OR PRECONDITION? OR PROCESS?
L58           21 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L48 AND L57
L59              QUE  SPE=ON  ABB=ON  PLU=ON  FIBER? OR FIBRE# OR FILAME
                 NT? OR THREAD? OR STRAND? OR RIBBON? OR FILIFORM? OR LI
                 SLE?
L61           21 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND L58
L62           16 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND L59
L63            1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L1 AND L62
L64           10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L62 AND L57
```

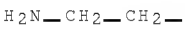
```
L65           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND (L47
                OR L51)
L66           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND L53
L67           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L65 OR L66
L68             QUE  SPE=ON  ABB=ON  PLU=ON  BLEACH? OR CHELAT?
L69           5 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND L68
L70           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND (L47
                OR L51 OR L53 OR L68)
L71           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L65 OR L66
                OR L67) OR L69
L72           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L70 AND L71
L73         285 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L42 OR L43
                OR L44)
L74          42 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND (L45
                OR L46)
L75          42 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L74 AND L48
L76          25 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L75 AND (L57
                OR L59 OR L68 OR L47 OR L51 OR L53 OR L68)
L78      215855 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  43/SC,SX
L79           4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L76 AND L78
L80             QUE  SPE=ON  ABB=ON  PLU=ON  PAPER? OR PULP? OR WOOD? O
                R LIGNIN?
L81       38749 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L80(3A)L59
L82           7 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L75 AND L80
L84           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L76 AND L80
L85             QUE  SPE=ON  ABB=ON  PLU=ON  ?POLYM?
L86      103950 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L28
L87       28082 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L34
L88      131561 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L86 OR L87
L89        5621 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L88 AND
                CHELAT?
L90        1329 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L89 AND L85
L91         571 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L90 AND L57
L92          54 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L91 AND
                (BLEACH? OR L47 OR L51 OR L53)
L93           3 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L92 AND (L59
                OR L80 OR L81)
L94        1490 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L88 AND L78
L95        1347 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L94 AND (L47
                OR L51 OR L53 OR L57 OR L59 OR L68 OR L80 OR L81)
L96         101 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L95 AND (L90
                OR L81)
L97          56 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L96 AND L57
L104         26 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L97 AND (L73
                OR L85)
L105         37 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L104 OR L52
                OR L54 OR L79 OR L82 OR L84 OR L93
L106         37 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L105 AND (L80
                OR CELLULOS?)
L107         37 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L61 OR L62
                OR L63 OR L64 OR L65 OR L66 OR L67) OR (L69 OR L70 OR
                L71 OR L72)
L108         14 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L107 AND (L80
                OR CELLULOS?)
L109         10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L107 AND L78
L110         47 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L106 OR L108
                OR L109
L111         47 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L110 AND (L73
                OR L85)
L112         38 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L111 AND L78
L113         38 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L112 AND (L73
                OR L45 OR L46)
L114         12 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L113 AND L73
L115         22 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND
                CHELAT?
L116     125753 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  "CHELATING
                AGENTS"+ALL/CT
```

```
L117          35 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND L116
L118          75 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L115 OR L117
                 OR L48
L119           4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L118 AND L57
                 AND L59
L120           4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L118 AND L59
L121          78 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L114 OR L115
                 OR (L117 OR L118 OR L119 OR L120)
L122          15 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L121 AND L78
L123             QUE  SPE=ON  ABB=ON  PLU=ON  PY=<2005 NOT P/DT
L124             QUE  SPE=ON  ABB=ON  PLU=ON  (PY=<2005 OR PRY=<2005 OR
                 AY=<2005 OR MY=<2005 OR REVIEW/DT) AND P/DT
L125          10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L122 AND
                 (L123 OR L124)
L126           3 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND L45
L127        6324 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L45 AND
                 (CHELAT? OR L116)
L128        1908 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L127 AND L85
L129          20 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L128 AND L78
L130           9 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L129 AND L57
L131          20 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L129 AND (L80
                 OR CELLULOS?)
L132           9 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L130 AND L131

L133             QUE  SPE=ON  ABB=ON  PLU=ON  POLYMER## OR HOMOPOLYMER##
                  OR COPOLYMER## OR TERPOLYMER## OR RESIN? OR GUM? OR PO
                 LYM?
L134        2012 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L127 AND L133

L135          22 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L134 AND L78
L136          22 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L135 AND (L80
                 OR CELLULOS?)
L137           9 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L136 AND L132

L138           9 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L130 OR L132
                 OR L137
L139          23 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L129 OR L130
                 OR L131 OR L132) OR (L135 OR L136 OR L137 OR L138)
L140           1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L139 AND (L47
                 OR L51)
L141           1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L139 AND
                 (BLEACH? OR L53)
L142           9 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L138 OR L140
                 OR L141
L143           7 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L142 AND
                 (L123 OR L124)
L145           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L126 AND
                 (L123 OR L124)
L146           1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L145 AND (L59
                 OR L80 OR CELLULOS?)
L147           8 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L143 OR L146
L148           8 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L147 NOT L125

L149           1 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L148 AND L73
L150           8 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L148 OR L149
```

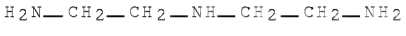
STRUCTURE SEARCH RESULTS

=> d l150 1-8 ibib ed abs hitstr hitind

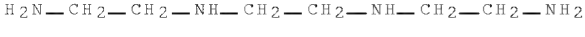
L150 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:475219 HCAPLUS Full-text
DOCUMENT NUMBER: 144:193983
TITLE: Syntheses and adsorption properties of calix{6}-crown-g-cellulose chelating resins
AUTHOR(S): Ji, Yan-qing; Yang, Fa-fu; Zheng, Lin-lu; Guo, Hong-yu
CORPORATE SOURCE: College of Chemistry and Material Science, Fujian Normal University, Fuzhou, 350007, Peop. Rep. China
SOURCE: Hecheng Huaxue (2005), 13(2), 166-168
CODEN: HEHUE2; ISSN: 1005-1511
PUBLISHER: Hecheng Huaxue Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 05 Jun 2005
AB A series of novel calix[6]-crown-g-cellulose chelating resins were synthesized by reaction of tetra-epoxy-Pr calix[6]-1,4-crown-4 with cellulose polyethylenimine derivs. The chelating resins not only keep high adsorption capacities but also exhibit excellent adsorption selectivity to Na+ and Ag+ due to the syncretic effect of cellulose derivs. and calixarene polymers.
IT 107-15-3DP, Ethylenediamine, reaction products with cellulose and crown[6]tetrakis(epoxypropyl) derivative
111-40-0DP, Diethylenetriamine, reaction products with cellulose and crown[6]tetrakis(epoxypropyl) derivative
112-24-3DP, Triethylenetetramine, reaction products with cellulose and crown[6]tetrakis(epoxypropyl) derivative
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(for syntheses of calix{6}-crown-g-cellulose chelating resins)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (CA INDEX NAME)



RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N1-(2-aminoethyl)- (CA INDEX NAME)



RN 112-24-3 HCAPLUS
CN 1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)- (CA INDEX NAME)



CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)
ST calix crown cellulose graft chelating

resin synthesis adsorption property
IT Adsorbents
Adsorption
(calix{6}-crown-g-cellulose chelating resins for adsorption of Na+ and Ag+)
IT 14280-50-3, Lead (2+), processes 14302-87-5, Mercury (2+), processes 14701-21-4, Silver (1+), processes 14701-22-5, Nickel (2+), processes 17341-25-2, Sodium (1+), processes 22541-53-3, Cobalt (2+), processes 24203-36-9, Potassium (1+), processes
RL: REM (Removal or disposal); PROC (Process)
(calix{6}-crown-g-cellulose chelating resins for adsorption of)
IT 247049-50-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(for syntheses of calix{6}-crown-cellulose graft chelating resins)
IT 107-15-3DP, Ethylenediamine, reaction products with cellulose and crown[6]tetrakis(epoxypropyl) derivative 111-40-0DP, Diethylenetriamine, reaction products with cellulose and crown[6]tetrakis(epoxypropyl) derivative 112-24-3DP, Triethylenetetramine, reaction products with cellulose and crown[6]tetrakis(epoxypropyl) derivative
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(for syntheses of calix{6}-crown-g-cellulose chelating resins)
IT 106-89-8, Epichlorohydrin, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(for syntheses of calix{6}-crown-g-cellulose chelating resins)
IT 864856-33-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(for syntheses of calix{6}-crown-g-cellulose chelating resins)
IT 9004-34-6DP, Cellulose, oligo(ethyleneamine) derivs., reaction products with crown[6]tetrakis(epoxypropyl) derivative 864856-33-7DP, reaction products with oligo(ethyleneamine)-functionalized cellulose
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(syntheses and adsorption properties of calix{6}-crown-g-cellulose chelating resins)

L150 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:97385 HCAPLUS Full-text
DOCUMENT NUMBER: 138:139214
TITLE: Perfluoroalkyl-substituted amines, acids, amino acids and thioether acids
INVENTOR(S): Haniff, Marlon; Deisenroth, Ted; Jennings, John; Mueller, Karl Friedrich
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003010128	A2	20030206	WO 2002-EP7874	2002 0716

<--

WO 2003010128 A3 20030925

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002331258 A1 20030217 AU 2002-331258
2002
0716

<--

EP 1412321 A2 20040428 EP 2002-767214
2002
0716

<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

BR 2002011404 A 20040817 BR 2002-11404
2002
0716

<--

CN 1535260 A 20041006 CN 2002-814843
2002
0716

<--

JP 2004536141 T 20041202 JP 2003-515488
2002
0716

<--

US 20030153780 A1 20030814 US 2002-202381
2002
0724

<--

US 6706923 B2 20040316

PRIORITY APPLN. INFO.: US 2001-307658P P
2001
0725

<--

US 2002-372491P P
2002
0415

<--

WO 2002-EP7874 W
2002
0716

<--

OTHER SOURCE(S): MARPAT 138:139214

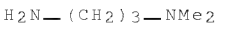
ED Entered STN: 07 Feb 2003

AB Perfluoroalkyl-substituted amines, acids, amino acids and thioether acid compds. containing a perfluoroalkyl-iodoalkyl or perfluoroalkyl-alkene group as well as derivs. thereof, are described. They are useful as surfactants in a variety of applications where low surface tensions are required, including coating formulations for glass, wood, metal, cement, paper, textiles, as foam control agents in polyurethane foams and especially in aqueous fire-fighting formulations.

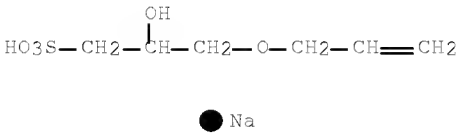
IT 109-55-7, 3-Dimethylamino-propylamine 52556-42-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of perfluoroalkyl-substituted amines, acids, amino acids and thioether acids)

RN 109-55-7 HCAPLUS

CN 1,3-Propanediamine, N1,N1-dimethyl- (CA INDEX NAME)



RN 52556-42-0 HCAPLUS
CN 1-Propanesulfonic acid, 2-hydroxy-3-(2-propen-1-yloxy)-, sodium salt (1:1) (CA INDEX NAME)



IC ICM C07C217-00
CC 46-6 (Surface Active Agents and Detergents)
Section cross-reference(s): 23, 42
IT Cement
Paper
Textiles
(preparation of perfluoroalkyl-substituted amines, acids, amino acids and thioether acids used as surfactants)
IT 68-11-1, Mercaptoacetic acid, reactions 107-41-5, Hexylene glycol 109-01-3, 1-Methylpiperazine 109-55-7, 3-Dimethylamino-propylamine 149-44-0, Rongalite 935-79-5, cis-1,2,3,6-Tetrahydrophthalic anhydride 7775-14-6, Sodium dithionite 52556-42-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of perfluoroalkyl-substituted amines, acids, amino acids and thioether acids)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L150 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:676457 HCAPLUS Full-text
DOCUMENT NUMBER: 137:171249
TITLE: Process to produce encapsulated fragrance coatings for paper
INVENTOR(S): Anversa Victor, Sidney
PATENT ASSIGNEE(S): Brazil
SOURCE: Braz. Pedido PI, 14 pp.
CODEN: BPXXDX
DOCUMENT TYPE: Patent
LANGUAGE: Portuguese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 2000000054	A	20010821	BR 2000-54	20000113

<--

PRIORITY APPLN. INFO.: BR 2000-54 20000113

<--

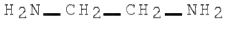
ED Entered STN: 09 Sep 2002

AB The process comprises complex coacervation using polyelectrolyte pairs of opposite charge; fragrance particles are dispersed in polycation solution, the polyanion emulsion is added and the mixture pH is adjusted to 3-6. The mixture is cooled to 10 to -10° to promote gelation or coacervation forming the microcapsules which are further mixed with a binder and may be then mixed with an appropriate vehicle to spread on a paper substrate or simply dried. The polyelectrolytes include polycations such as denatured proteins, albumins, gelatins, and pectins and polyanions such as polyphosphates, acrylic polymers, aspartic acid polymers, acacia gum, gum arabic, and alginates. The binders are selected from ethanolamine, ethylenediamine, boric acid, borates, formaldehyde, glutaraldehyde, or glyoxal. The microcapsules are mixed with an ink, adhesive or paper coating and the mixture is used to coat a paper substrate by offset process to produce fragrance-bearing paper.

IT 107-15-3, Ethylenediamine, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(microcapsule binder; coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

RN 107-15-3 HCAPLUS

CN 1,2-Ethanediamine (CA INDEX NAME)



IC ICM B01J013-08

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 42

ST encapsulated fragrance anionic cationic polyelectrolyte pair coacervation; microcapsule fragrance drying dispersion binder ink adhesive; paper fragrance microcapsule coating formulation

IT Polyelectrolytes
(anionic; coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

IT Polyelectrolytes
(cationic; coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

IT Adhesion promoters
Coating materials
Encapsulation
Inks
Microcapsules
Odor and Odorous substances
Paper
(coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

IT Acrylic polymers, uses
Albumins, uses
Gelatins, uses
Polyphosphates
Proteins
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(encapsulant; coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

IT Borates
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(microcapsule binder; coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

IT 56-84-8D, Aspartic acid, polymers
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

IT 9000-01-5, Gum arabic 9000-69-5, Pectin
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(encapsulant; coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

IT 50-00-0, Formaldehyde, uses 107-15-3, Ethylenediamine, uses 107-22-2, Glyoxal 111-30-8, Glutaraldehyde 141-43-5, Ethanolamine, uses 10043-35-3, Boric acid, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(microcapsule binder; coacervation of polyelectrolytes of opposite charge in encapsulation of fragrance and use of microcapsules in coatings for paper)

L150 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:573995 HCAPLUS Full-text
DOCUMENT NUMBER: 133:165306
TITLE: Process for oxygen pulping of lignocellulosic material and recovery of pulping chemicals
INVENTOR(S): Stigsson, Lars
PATENT ASSIGNEE(S): Kiram Ab, Swed.
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000047812	A1	20000817	WO 2000-SE288	2000 0214
			<--	
W: BR, CA, CN, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2356444	A1	20000817	CA 2000-2356444	2000 0214
			<--	
BR 2000008237	A	20011106	BR 2000-8237	2000 0214
			<--	
EP 1161592	A1	20011212	EP 2000-913202	2000 0214

<--

EP 1161592 B1 20040922
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
JP 2002536563 T 20021029 JP 2000-598702
2000
0214
<--
AT 277222 T 20041015 AT 2000-913202
2000
0214
<--
CN 1213197 C 20050803 CN 2000-803702
2000
0214
<--
WO 2001059204 A1 20010816 WO 2000-SE1578
2000
0815
<--
W: AU, BR, CA, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
US 6770168 B1 20040803 US 2001-913409
2001
0814
<--
PRIORITY APPLN. INFO.: WO 1999-SE191 W
1999
0215
<--
WO 2000-SE288 W
2000
0214
<--

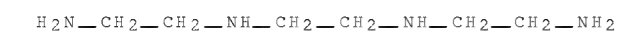
ED Entered STN: 18 Aug 2000

AB The process of the present invention relates to a substantially sulfur free process for the manufacturing of a chemical pulp with an integrated recovery system for recovery of pulping chems. The subject process is carried out in several stages involving phys. and chemical treatment of lignocellulosic material in order to increase accessibility of the lignocellulosic material to reactions with an oxygen-based delignification agent. Spent cellulose liquor comprising lignin components and spent chemical reagents is fully or partially oxidized in a gas generator wherein a stream of hot raw gas and a stream of alkaline chems. and chemical reagents is formed for subsequent recycle and reuse in the pulp manufacturing process.

IT 112-24-3D, compds.
RL: CAT (Catalyst use); USES (Uses)
(process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

RN 112-24-3 HCAPLUS

CN 1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)- (CA INDEX NAME)

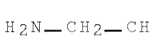


IT 7722-84-1, Hydrogen peroxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

RN 7722-84-1 HCAPLUS

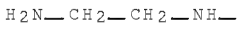
CN Hydrogen peroxide (H2O2) (CA INDEX NAME)

IT 107-15-3, Ethylenediamine, uses
RL: MOA (Modifier or additive use); USES (Uses)
(scavenger; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (CA INDEX NAME)



IT 107-15-3D, Ethylenediamine, compds. 111-40-0D, Diethylenetriamine, compds.
RL: CAT (Catalyst use); USES (Uses)
(transition metal catalyst; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (CA INDEX NAME)

RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N1-(2-aminoethyl)- (CA INDEX NAME)



IC ICM D21C003-02
ICS D21C011-12
CC 43-6 (Cellulose, Lignin, Paper, and Other Wood Products)
ST oxidn lignocellulosic material pulping method
IT Polyoxyalkylenes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(carboxylated, quaternized, surface active agent; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT Transition metals, uses
RL: CAT (Catalyst use); USES (Uses)
(catalysts; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(ethoxylated, surface active agent; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT Amines, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(fatty, ethoxylated, surface active agent; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Fibers
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(lignocellulosic; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Surfactants
(nonionic; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Phosphazenes
RL: MOA (Modifier or additive use); USES (Uses)
(polyelectrolytes; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Alcohols, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyhydric, ethoxylated, surface active agent; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Buffers
Cellulose pulp
Oxidation
Oxidizing agents
Polyelectrolytes
Radical scavengers
(process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Pulping liquors, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Alcohols, uses
Amines, uses
Ketones, uses
RL: MOA (Modifier or additive use); USES (Uses)
(scavenger; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Pulping liquors, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(spent; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Lecithins
RL: TEM (Technical or engineered material use); USES (Uses)
(surface active agent; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT Surfactants
(zwitterionic; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT 7440-09-7D, Potassium, compds., uses 7440-23-5D, Sodium, compds., uses
RL: MOA (Modifier or additive use); USES (Uses)
(buffer solution containing; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)

IT 7439-95-4D, Magnesium, compds., uses 7553-56-2D, Iodine, compds., uses
RL: MOA (Modifier or additive use); USES (Uses)
(carbohydrate protector; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT 9003-01-4, Poly(acrylic acid) 9003-20-7, Poly(vinyl acetate) 9003-47-8, Poly(vinyl pyridine) 25087-26-7 25232-42-2, Poly(vinyl imidazole) 26336-38-9, Vinylamine polymer
RL: MOA (Modifier or additive use); USES (Uses)
(polyelectrolytes; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT 112-24-3D, compds. 7439-89-6D, Iron, compds., uses 7439-96-5D, Manganese, compds., uses 7440-18-8D, Ruthenium, compds., uses 7440-48-4D, Cobalt, compds., uses 7440-50-8D, Copper, compds., uses
RL: CAT (Catalyst use); USES (Uses)
(process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT 7722-84-1, Hydrogen peroxide, reactions 7782-44-7, Oxygen, reactions 10028-15-6, Ozone, reactions 10049-04-4, Chlorine dioxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-64-1, Acetone, uses 71-23-8, Propanol, uses 75-84-3, Neopentyl alcohol 78-83-1, Isobutyl alcohol, uses 107-15-3, Ethylenediamine, uses 108-46-3, Resorcinol, uses 141-43-5, Ethanolamine, uses
RL: MOA (Modifier or additive use); USES (Uses)
(scavenger; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT 25322-69-4D, Poly(propylene glycol), carboxylated, quaternized 106392-12-5, Ethylene oxide-propylene oxide block copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(surface active agent; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
IT 57-12-5D, Cyanide, compds., uses 102-71-6D, Triethanolamine, compds. 107-15-3D, Ethylenediamine, compds. 110-86-1D, Pyridine, compds., uses 111-40-0D, Diethylenetriamine, compds. 123-54-6D, Acetylacetone, compds. 148-24-3D, Oxyquinoline, compds. 7664-41-7D, Ammonia, compds., uses 12678-01-2D, Phenanthroline, compds. 37275-48-2D, Bipyridyl, compds.
RL: CAT (Catalyst use); USES (Uses)
(transition metal catalyst; process for oxygen pulping of lignocellulosic material and recovery of pulping chems.)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L150 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:994524 HCAPLUS Full-text
DOCUMENT NUMBER: 124:32343
ORIGINAL REFERENCE NO.: 124:6147a,6150a
TITLE: Process for controlling impurities in papermaking.
INVENTOR(S): Koenig, Joachim; Kopp, Jurgen; Hendricks, Udo-Winfried; Reiners, Juergen; Nowak, Peter

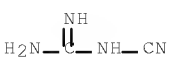
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 5 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 674046	A2	19950927	EP 1995-103329	1995 0308
			<--	
EP 674046	A3	19960522		
EP 674046	B1	19990609		
R: AT, CH, DE, FR, GB, IT, LI, NL, SE				
DE 4409580	A1	19950928	DE 1994-4409580	1994 0321
			<--	
AT 181121	T	19990615	AT 1995-103329	1995 0308
			<--	
JP 07279091	A	19951024	JP 1995-84482	1995 0317
			<--	
PRIORITY APPLN. INFO.:			DE 1994-4409580 A	1994 0321
			<--	

ED Entered STN: 22 Dec 1995
AB Anionic impurities can be controlled in papermaking by addition, alone or with other auxiliaries, of cationic polycondensates which can be obtained by the reaction of (a) monofunctional or polyfunctional amines with ≥1 primary and(or) secondary and(or) tertiary amino groups with (b) cyanamide, dicyandiamide, guanidine, or biguanidine, wherein ≤50 mol% of cyanamide, dicyandiamide, or biguanidine can be replaced by a dicarboxylic acid or a mono- or diester thereof, with separation of NH3, optionally in the presence of a catalyst. Thus, dicyandiamide suspended in diethylene glycol was mixed with diethylenetriamine and heated until evolution of NH3 was completed. The clear high-viscosity melt was cooled, diluted with water, and adjusted to pH 6.5-7.0 to give a clear, light-yellow solution which was diluted to a solids content of 42%. This product was used for the control of anionic impurities during such papermaking processes as dewatering and wet-strength finishing.
IT 50862-68-5P, Dicyandiamide-diethylenetriamine copolymer
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(amide-amine copolymer polyelectrolytes for controlling anionic impurities in papermaking)
RN 50862-68-5 HCAPLUS
CN Guanidine, N-cyano-, polymer with N1-(2-aminoethyl)-1,2-ethanediamine (CA INDEX NAME)

CM 1

CRN 461-58-5
CMF C2 H4 N4



CM 2

CRN 111-40-0
CMF C4 H13 N3

IC ICM D21H021-02
ICS D21H017-55
CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
ST amide amine polyelectrolyte papermaking impurity control; diethylenetriamine dicyandiamide copolymer papermaking anion control
IT Paper
Polyelectrolytes
(amide-amine copolymer polyelectrolytes for controlling anionic impurities in papermaking)
IT Amides, reactions
Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(amide-amine copolymer polyelectrolytes for controlling anionic impurities in papermaking)
IT 50862-68-5P, Dicyandiamide-diethylenetriamine copolymer
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(amide-amine copolymer polyelectrolytes for controlling anionic impurities in papermaking)

L150 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1993:540403 HCAPLUS Full-text
DOCUMENT NUMBER: 119:140403
ORIGINAL REFERENCE NO.: 119:25205a,25208a
TITLE: Epihalohydrin-based resins having a reduced halogen content
INVENTOR(S): Gorzynski, Marek; Pingel, Andreas
PATENT ASSIGNEE(S): AKZO N.V., Neth.
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9222601	A1	19921223	WO 1992-EP1134	1992 0519 <--
W: CA, CS, FI, HU, JP, PL, RU, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2111685	A1	19921223	CA 1992-2111685	1992 0519 <--
CA 2111685	C	20020416		

```
EP 589917            A1    19940406    EP 1992-910779
                                                      1992
                                                      0519
                                         <--
EP 589917            B1    19980819
    R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE
JP 06508864          T     19941006    JP 1992-509781
                                                      1992
                                                      0519
                                         <--
JP 3104914           B2    20001030
HU 66765             A2    19941228    HU 1993-3655
                                                      1992
                                                      0519
                                         <--
HU 212243            B     19960429
PL 169960            B1    19960930    PL 1992-301831
                                                      1992
                                                      0519
                                         <--
EP 776923            A2    19970604    EP 1997-200522
                                                      1992
                                                      0519
                                         <--
EP 776923            A3    19970806
EP 776923            B1    20040818
    R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE
CZ 282303            B6    19970611    CZ 1993-2765
                                                      1992
                                                      0519
                                         <--
RU 2110532           C1    19980510    RU 1993-58505
                                                      1992
                                                      0519
                                         <--
AT 169943            T     19980915    AT 1992-910779
                                                      1992
                                                      0519
                                         <--
ES 2120447           T3    19981101    ES 1992-910779
                                                      1992
                                                      0519
                                         <--
SK 279996            B6    19990611    SK 1993-1318
                                                      1992
                                                      0519
                                         <--
JP 2000273170        A     20001003    JP 2000-62086
                                                      1992
                                                      0519
                                         <--
JP 3305695           B2    20020724
AT 274017            T     20040915    AT 1997-200522
                                                      1992
                                                      0519
                                         <--
ES 2222496           T3    20050201    ES 1997-200522
                                                      1992
                                                      0519
                                         <--
US 5516885           A     19960514    US 1993-167879
                                                      1993
                                                      1215
                                         <--
FI 110188            B1    20021213    FI 1993-5703
                                                      1993
                                                      1217
```

				<--	
US 6376578	B1	20020423	US 1995-554624		
					1995
					1106
				<--	
PRIORITY APPLN. INFO.:			EP 1991-201553	A	
					1991
					0619
				<--	
			EP 1992-910779	A3	
					1992
					0519
				<--	
			JP 1992-509781	A3	
					1992
					0519
				<--	
			WO 1992-EP1134	W	
					1992
					0519
				<--	
			US 1993-167879	A1	
					1993
					1215
				<--	

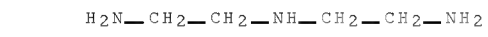
ED Entered STN: 02 Oct 1993

AB A process for preparation of water-soluble and N-containing the title resins comprises treating the resins with a basic ion-exchangers. Thus, a Cl content <1% resin was prepared by treating Etadurin NXH (epichlorohydrin-based resin, solid content 20%, Cl content 11.7%) with Dowex SAR and adjusting pH to 3.4.

IT 111-40-0D, Diethylenetriamine, polymers,
reaction products with epichlorohydrin
RL: USES (Uses)
(ion-changer-treated, for low chlorine content)

RN 111-40-0 HCAPLUS

CN 1,2-Ethanediamine, N1-(2-aminoethyl)- (CA INDEX NAME)



IC ICM C08G065-30
ICS D21H017-56

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 43

IT Ion exchangers
(epichlorohydrin-based polyamide-polyamines treated by, for low chlorine content)

IT Quaternary ammonium compounds, uses
RL: USES (Uses)
(ion-changers, epichlorohydrin-based polyamide-polymines treated by, for low chlorine content)

IT Paper
(wet strength additives for, ion-exchanger-treated polyamide-polyamines as)

IT Polyamines
RL: MSC (Miscellaneous)
(polyamide-, epichlorohydrin-based, ion-exchanger-treated, for low chlorine content)

IT Polyamides, miscellaneous
RL: MSC (Miscellaneous)
(polyamine-, epichlorohydrin-based, ion-exchanger-treated, for low chlorine content)

IT Amines, uses
RL: USES (Uses)
(tertiary, ion-changers, epichlorohydrin-based polyamide-polymines treated by, for low chlorine content)
IT 106-89-8D, Epichlorohydrin, reaction products with polyamide-polyamines 111-40-0D, Diethylenetriamine, polymers, reaction products with epichlorohydrin 124-04-9D, Adipic acid, polymers, reaction products with epichlorohydrin 140-31-8D, 1-Piperazineethanamine, polymers, reaction products with epichlorohydrin 5669-45-4D, Dimethylenetriamine, polymers, reaction products with epichlorohydrin 122879-02-1, Nadavin LTN-A 149779-44-2, Etadurin H 149779-45-3, Etadurin NXH 149779-52-2, Giluton 1100-28 149779-63-5, Kymene SLX 149779-72-6, Nadavin LT-A
RL: USES (Uses)
(ion-changer-treated, for low chlorine content)
IT 108-01-0D, compds. 16962-53-1D, Trimethylammonium, compds. 86243-30-3, Dowex SAR
RL: USES (Uses)
(ion-changers, epichlorohydrin-based polyamide-polymines treated by, with low chlorine content)
IT 7782-50-5, Chlorine, uses
RL: USES (Uses)
(reducing of, in epichlorohydrin-based polyamide-polyamines, for paper wet agents)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L150 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1987:619397 HCAPLUS Full-text
DOCUMENT NUMBER: 107:219397
ORIGINAL REFERENCE NO.: 107:35209a,35212a
TITLE: Pitch control aid
INVENTOR(S): Hassler, Thord Gustav Gunnar
PATENT ASSIGNEE(S): W. R. Grace and Co., Swed.
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 232015	A1	19870812	EP 1987-300212	19870109
			<--	
EP 232015	B1	19901212		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
GB 2186895	A	19870826	GB 1986-506	19860109
			<--	
GB 2186895	B	19891101		
FI 8700072	A	19870710	FI 1987-72	19870108
			<--	
FI 88814	B	19930331		
FI 88814	C	19930712		
CA 1306570	C	19920818	CA 1987-526936	

				1987 0108 <--
JP 62223394	A	19871001	JP 1987-1956	1987 0109 <--
JP 07113200	B	19951206		
AT 59068	T	19901215	AT 1987-300212	1987 0109 <--
PRIORITY APPLN. INFO.:			GB 1986-506	A 1986 0109 <--
			EP 1987-300212	A 1987 0109 <--

ED Entered STN: 12 Dec 1987

AB Pitch control aid compns. for pulp in papermaking machinery comprise H2O-soluble polymers derived from (a) an epihalohydrin, a diepoxide, or a precursor of an epihalohydrin or diepoxide, (b) an alkyl amine having a functionality of 2 with respect to an epihalohydrin, and (c) a carbonyl group-free amine having a functionality >2 with respect to an epihalohydrin. Thus, an aqueous solution containing 183.5 g of 32.7% Me2NH and 76.04 g of 36% HCl was reacted with 208.12 g epichlorohydrin at 35-40° to give a coupling agent stock solution, 176.9 g of which was heated to 60°, reacted with 5.94 g ethylenediamine for 1 h, and with 32.48 g of 30% Me3N at 90° to give after cooling a H2O-soluble polymer with solids 40.7%. A synthetic pitch emulsion/dispersion containing 1200 ppm pitch was treated with aqueous CaCl2 to reach a hardness of 340 ppm (in terms of CaCO3), adjusted to pH 8.0, and treated with 10 ppm water-soluble polymer. The amount of deposited pitch (TAPPI standard method RC324) was 2 mg, compared with 80 mg for a pitch emulsion treated with 10 ppm aminoplast resin (U.S. patent number 3,582,461).

IT 107-15-3D, Ethylenediamine, polymers with alkyl amines and epichlorohydrin 109-55-7D, polymers with alkyl amines and epichlorohydrin
RL: USES (Uses)
(pitch control aides, for pulp and paper making)

RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH_2$

RN 109-55-7 HCAPLUS
CN 1,3-Propanediamine, N1,N1-dimethyl- (CA INDEX NAME)

$H_2N-(CH_2)_3-NMe_2$

IC ICM D21H003-48
CC 43-6 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 37
ST pitch control water soluble polymer; epichlorohydrin polymer pitch control pulping; amine polymer pitch control pulping; methylamine polymer pitch control pulping; ethylenediamine

polymer pitch control pulping
IT Pitch
(deposition of, control of, in pulp and paper manufacture, water-soluble polymers for)
IT Paper
Pulp, cellulose
(manufacture of, pitch deposit control in, water soluble polymers for)
IT Polyelectrolytes
(cationic, pitch control aides, for pulp and paper making)
IT 75-50-3D, Trimethylamine, polymers with alkyl amines and epichlorohydrin 102-71-6D, Triethanolamine, polymers with alkyl amines and epichlorohydrin 106-89-8D, Epichlorohydrin, polymers with alkyl amines 107-15-3D, Ethylenediamine, polymers with alkyl amines and epichlorohydrin 109-55-7D, polymers with alkyl amines and epichlorohydrin 124-30-1D, Octadecylamine, polymers with alkyl amines and epichlorohydrin 124-40-3D, Dimethylamine, polymers with alkyl amines and epichlorohydrin
RL: USES (Uses)
(pitch control aides, for pulp and paper making)
IT 9004-34-6P
RL: PREP (Preparation)
(pulp, manufacture of, pitch deposit control in, water soluble polymers for)

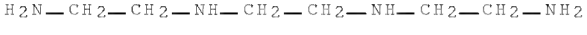
L150 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1985:186014 HCAPLUS Full-text
DOCUMENT NUMBER: 102:186014
ORIGINAL REFERENCE NO.: 102:29197a,29200a
TITLE: Complexon derivatives of pearl cellulose
INVENTOR(S): Kahovec, Jaroslav; Benes, Milan; Tokar, Oldrich; Matejka, Zdenek
PATENT ASSIGNEE(S): Czech.
SOURCE: Czech., 6 pp.
CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Czech
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 225503	B1	19840213	CS 1982-5225	1982 0708
			<--	
PRIORITY APPLN. INFO.:			CS 1982-5225	1982 0708
			<--	

ED Entered STN: 02 Jun 1985
AB Polymers useful in complexing or separation of heavy metals or purification of wastewater are prepared by treating oligo(ethylenimine) derivs. of cellulose with excess ClCH2CO2H solution and neutralization. Thus, 15 mL wet diethylenetriamine derivative of pearl cellulose (1.63 mmol bound amine/g solids) and 9.6 g ClCH2CO2H and 5.3 g Na2CO3 in 20 mL water were heated at 80° and pH 7-8. The product contained 5.32% N (1.27 mmol bound complexon/g solid) and had sorption capacity .apprx.6.6 mg Cu++/mL wet resin.
IT 111-40-0DP, cellulose derivs., carboxymethylated
112-24-3DP, cellulose derivs., carboxymethylated
RL: PREP (Preparation)

(chelating resins, manufacture of)
RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N1-(2-aminoethyl)- (CA INDEX NAME)

RN 112-24-3 HCAPLUS
CN 1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)- (CA INDEX NAME)



IC C08B015-04
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 43
ST chelating resin cellulose polyamine;
diethylenetriamine cellulose deriv sorbent;
carboxymethylation diethylenetriamine cellulose deriv;
copper complexing resin
IT Chelating agents
(polymeric, manufacture of)
IT 79-11-8DP, reaction products with polyamine cellulose
derivs. 111-40-0DP, cellulose derivs.,
carboxymethylated 112-24-3DP, cellulose
derivs., carboxymethylated 9004-34-6DP, polyamine derivs.,
carboxymethylated
RL: PREP (Preparation)
(chelating resins, manufacture of)

FULL SEARCH HISTORY

```
=> d his nofile

     (FILE 'HOME' ENTERED AT 14:10:40 ON 23 JUL 2009)

     FILE 'HCAPLUS' ENTERED AT 14:10:48 ON 23 JUL 2009
                E US20080035287/PN
L1              1 SEA SPE=ON  ABB=ON  PLU=ON  US20080035287/PN
                D ALL
                SEL RN

     FILE 'REGISTRY' ENTERED AT 14:11:56 ON 23 JUL 2009
L2              6 SEA SPE=ON  ABB=ON  PLU=ON  (15827-60-8/BI OR 67-43-6/B
                I OR 7722-84-1/BI OR 7722-86-3/BI OR 78266-09-8/BI OR
                79-21-0/BI)
                D SCA

     FILE 'STNGUIDE' ENTERED AT 14:13:27 ON 23 JUL 2009

     FILE 'REGISTRY' ENTERED AT 14:19:50 ON 23 JUL 2009
                E MALEIC ACID/CN
L3              1 SEA SPE=ON  ABB=ON  PLU=ON  MALEIC ACID/CN
                D SCA
                D
L4          32238 SEA SPE=ON  ABB=ON  PLU=ON  110-16-7/CRN
                E ITACONIC ACID/CN
L5              1 SEA SPE=ON  ABB=ON  PLU=ON  ITACONIC ACID/CN
                D
L6           6171 SEA SPE=ON  ABB=ON  PLU=ON  97-65-4/CRN
                E ACRYLIC ACID/CN
                E ACRYLIC ACID/CN
L7              1 SEA SPE=ON  ABB=ON  PLU=ON  ACRYLIC ACID/CN
                D
L8          69687 SEA SPE=ON  ABB=ON  PLU=ON  79-10-7/CRN
                E METHACRYLIC ACID/CN
L9              1 SEA SPE=ON  ABB=ON  PLU=ON  METHACRYLIC ACID/CN
                D
L10         54330 SEA SPE=ON  ABB=ON  PLU=ON  79-41-4/CRN
L11        152885 SEA SPE=ON  ABB=ON  PLU=ON  (L3 OR L4 OR L5 OR L6 OR
                L7 OR L8 OR L9 OR L10)

     FILE 'LREGISTRY' ENTERED AT 14:24:58 ON 23 JUL 2009
L12             STR

     FILE 'REGISTRY' ENTERED AT 14:30:02 ON 23 JUL 2009
L13             9 SEA SSS SAM L12
                D SCA
L14           213 SEA SSS FUL L12
                SAV TEMP L14 MIN564REG/A
L15             1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND L14
                D SCA
L16           135 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND L11

     FILE 'LREGISTRY' ENTERED AT 14:32:20 ON 23 JUL 2009
L17             STR
L18             STR L17

     FILE 'REGISTRY' ENTERED AT 14:40:23 ON 23 JUL 2009
L19             7 SEA SUB=L14 SSS SAM L17 OR L18
                D SCA
L20           175 SEA SUB=L14 SSS FUL L17 OR L18
                SAV TEMP L20 MIN564REGA/A
L21             2 SEA SUB=L14 SSS SAM L17 AND L12 AND L18
                D SCA
L22            13 SEA SUB=L14 SSS FUL L17 AND L12 AND L18
```

```
                D SCA
                SAV TEMP L22 MIN564REGB/A
L23         175 SEA SPE=ON  ABB=ON  PLU=ON  L20 OR L22

     FILE 'LREGISTRY' ENTERED AT 14:47:07 ON 23 JUL 2009
L24             STR

     FILE 'REGISTRY' ENTERED AT 15:18:59 ON 23 JUL 2009
L25          18 SEA SSS SAM L24
L26             SCR 1918 OR 1838 OR 1929 OR 2003 OR 1925 OR 1983 OR 201
L27          50 SEA SSS SAM L24 NOT L26
L28        6807 SEA SSS FUL L24 NOT L26
                SAV TEMP L28 MIN564REGC/A
                E PHOSPHONIC ACID/CN
L29           1 SEA SPE=ON  ABB=ON  PLU=ON  PHOSPHONIC ACID/CN
                D SCA

     FILE 'LREGISTRY' ENTERED AT 15:30:17 ON 23 JUL 2009
L30             STR

     FILE 'REGISTRY' ENTERED AT 15:58:59 ON 23 JUL 2009
L31          50 SEA SSS SAM L30

     FILE 'LREGISTRY' ENTERED AT 16:00:27 ON 23 JUL 2009
L32             STR L30

     FILE 'REGISTRY' ENTERED AT 16:01:30 ON 23 JUL 2009
L33          50 SEA SSS SAM L32
L34       16568 SEA SSS FUL L32
                SAV TEMP L34 MIN564REGD/A

     FILE 'HCAPLUS' ENTERED AT 16:02:52 ON 23 JUL 2009
                D SCA L1

     FILE 'REGISTRY' ENTERED AT 16:02:52 ON 23 JUL 2009
L35           1 SEA SPE=ON  ABB=ON  PLU=ON  7722-84-1/RN
L36           1 SEA SPE=ON  ABB=ON  PLU=ON  7722-86-3/RN
L37           1 SEA SPE=ON  ABB=ON  PLU=ON  79-21-0/RN
L38           3 SEA SPE=ON  ABB=ON  PLU=ON  (L35 OR L36 OR L37)
L39           1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND L16
L40           0 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND L28
L41           0 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND L34
                D SCA L2

     FILE 'HCAPLUS' ENTERED AT 16:08:42 ON 23 JUL 2009
L42         175 SEA SPE=ON  ABB=ON  PLU=ON  L16
L43         201 SEA SPE=ON  ABB=ON  PLU=ON  L23
L44         285 SEA SPE=ON  ABB=ON  PLU=ON  L14
L45      103950 SEA SPE=ON  ABB=ON  PLU=ON  L28
L46       28082 SEA SPE=ON  ABB=ON  PLU=ON  L34
L47      125122 SEA SPE=ON  ABB=ON  PLU=ON  L38
L48          42 SEA SPE=ON  ABB=ON  PLU=ON  L44 AND (L45 OR L46)
L49           1 SEA SPE=ON  ABB=ON  PLU=ON  L48 AND L47
                D SCA

     FILE 'REGISTRY' ENTERED AT 16:12:38 ON 23 JUL 2009
                SET SMARTSELECT ON
L50             SEL PLU=ON  L38 1- NAME :      90 TERMS
                SET SMARTSELECT OFF

     FILE 'HCAPLUS' ENTERED AT 16:12:38 ON 23 JUL 2009
L51      150692 SEA SPE=ON  ABB=ON  PLU=ON  L50
L52           1 SEA SPE=ON  ABB=ON  PLU=ON  L48 AND L51
                D KWIC
L53      376956 SEA SPE=ON  ABB=ON  PLU=ON  ?PEROXIDE? OR ?PEROXYGEN?
L54           2 SEA SPE=ON  ABB=ON  PLU=ON  L48 AND L53
                D SCA
```

```
L55           0 SEA SPE=ON  ABB=ON  PLU=ON  L48 AND L1
L56           1 SEA SPE=ON  ABB=ON  PLU=ON  L44 AND L1
                D SCA
L57             QUE SPE=ON  ABB=ON  PLU=ON  TREAT? OR PRETREAT? OR
                CONDITION? OR PRECONDITION? OR PROCESS?
L58          21 SEA SPE=ON  ABB=ON  PLU=ON  L48 AND L57
L59             QUE SPE=ON  ABB=ON  PLU=ON  FIBER? OR FIBRE# OR
                FILAMENT? OR THREAD? OR STRAND? OR RIBBON? OR FILIFORM?
                 OR LISLE?
L60           0 SEA SPE=ON  ABB=ON  PLU=ON  L48 AND L59
L61          21 SEA SPE=ON  ABB=ON  PLU=ON  L44 AND L58
L62          16 SEA SPE=ON  ABB=ON  PLU=ON  L44 AND L59
L63           1 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L62
                D SCA
                D QUE
L64          10 SEA SPE=ON  ABB=ON  PLU=ON  L62 AND L57
                D SCA
L65           2 SEA SPE=ON  ABB=ON  PLU=ON  L64 AND (L47 OR L51)
                D SCA
L66           2 SEA SPE=ON  ABB=ON  PLU=ON  L64 AND L53
L67           2 SEA SPE=ON  ABB=ON  PLU=ON  L65 OR L66
                D SCA
L68             QUE SPE=ON  ABB=ON  PLU=ON  BLEACH? OR CHELAT?
L69           5 SEA SPE=ON  ABB=ON  PLU=ON  L64 AND L68
                D SCA
L70           6 SEA SPE=ON  ABB=ON  PLU=ON  L64 AND (L47 OR L51 OR L53
                OR L68)
L71           6 SEA SPE=ON  ABB=ON  PLU=ON  (L65 OR L66 OR L67) OR L69
L72           6 SEA SPE=ON  ABB=ON  PLU=ON  L70 AND L71
L73         285 SEA SPE=ON  ABB=ON  PLU=ON  (L42 OR L43 OR L44)
L74          42 SEA SPE=ON  ABB=ON  PLU=ON  L73 AND (L45 OR L46)
L75          42 SEA SPE=ON  ABB=ON  PLU=ON  L74 AND L48
L76          25 SEA SPE=ON  ABB=ON  PLU=ON  L75 AND (L57 OR L59 OR L68
                OR L47 OR L51 OR L53 OR L68)
L77           0 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L76
                D SCA L63
L78      215855 SEA SPE=ON  ABB=ON  PLU=ON  43/SC,SX
L79           4 SEA SPE=ON  ABB=ON  PLU=ON  L76 AND L78
                D SCA
L80             QUE SPE=ON  ABB=ON  PLU=ON  PAPER? OR PULP? OR WOOD?
                OR LIGNIN?
L81       38749 SEA SPE=ON  ABB=ON  PLU=ON  L80(3A)L59
L82           7 SEA SPE=ON  ABB=ON  PLU=ON  L75 AND L80
L83           0 SEA SPE=ON  ABB=ON  PLU=ON  L75 AND L81
L84           6 SEA SPE=ON  ABB=ON  PLU=ON  L76 AND L80
L85             QUE SPE=ON  ABB=ON  PLU=ON  ?POLYM?
L86      103950 SEA SPE=ON  ABB=ON  PLU=ON  L28
L87       28082 SEA SPE=ON  ABB=ON  PLU=ON  L34
L88      131561 SEA SPE=ON  ABB=ON  PLU=ON  L86 OR L87
L89        5621 SEA SPE=ON  ABB=ON  PLU=ON  L88 AND CHELAT?
L90        1329 SEA SPE=ON  ABB=ON  PLU=ON  L89 AND L85
L91         571 SEA SPE=ON  ABB=ON  PLU=ON  L90 AND L57
L92          54 SEA SPE=ON  ABB=ON  PLU=ON  L91 AND (BLEACH? OR L47 OR
                L51 OR L53)
L93           3 SEA SPE=ON  ABB=ON  PLU=ON  L92 AND (L59 OR L80 OR
                L81)
                D SCA
L94        1490 SEA SPE=ON  ABB=ON  PLU=ON  L88 AND L78
L95        1347 SEA SPE=ON  ABB=ON  PLU=ON  L94 AND (L47 OR L51 OR L53
                OR L57 OR L59 OR L68 OR L80 OR L81)
L96         101 SEA SPE=ON  ABB=ON  PLU=ON  L95 AND (L90 OR L81)
L97          56 SEA SPE=ON  ABB=ON  PLU=ON  L96 AND L57
L98          57 SEA SPE=ON  ABB=ON  PLU=ON  L95 AND CHELAT?
L99         106 SEA SPE=ON  ABB=ON  PLU=ON  L97 OR L98
L100          7 SEA SPE=ON  ABB=ON  PLU=ON  L97 AND L98
                D SCA
L101         32 SEA SPE=ON  ABB=ON  PLU=ON  L99 AND (L51 OR L53 OR L47
```

```
                OR BLEACH?)
L102          10 SEA SPE=ON  ABB=ON  PLU=ON  (L93 OR L100 OR L101) AND
                (L73 OR L85)
L103          11 SEA SPE=ON  ABB=ON  PLU=ON  L98 AND (L73 OR L85)
L104          26 SEA SPE=ON  ABB=ON  PLU=ON  L97 AND (L73 OR L85)
L105          37 SEA SPE=ON  ABB=ON  PLU=ON  L104 OR L52 OR L54 OR L79
                OR L82 OR L84 OR L93
L106          37 SEA SPE=ON  ABB=ON  PLU=ON  L105 AND (L80 OR CELLULOS?)
L107          37 SEA SPE=ON  ABB=ON  PLU=ON  (L61 OR L62 OR L63 OR L64
                OR L65 OR L66 OR L67) OR (L69 OR L70 OR L71 OR L72)
L108          14 SEA SPE=ON  ABB=ON  PLU=ON  L107 AND (L80 OR CELLULOS?)
L109          10 SEA SPE=ON  ABB=ON  PLU=ON  L107 AND L78
L110          47 SEA SPE=ON  ABB=ON  PLU=ON  L106 OR L108 OR L109
L111          47 SEA SPE=ON  ABB=ON  PLU=ON  L110 AND (L73 OR L85)
L112          38 SEA SPE=ON  ABB=ON  PLU=ON  L111 AND L78
L113          38 SEA SPE=ON  ABB=ON  PLU=ON  L112 AND (L73 OR L45 OR
                L46)
L114          12 SEA SPE=ON  ABB=ON  PLU=ON  L113 AND L73
L115          22 SEA SPE=ON  ABB=ON  PLU=ON  L73 AND CHELAT?
                E CHELATING AGENTS/CT
                E E3+ALL
L116      125753 SEA SPE=ON  ABB=ON  PLU=ON  "CHELATING AGENTS"+ALL/CT
L117          35 SEA SPE=ON  ABB=ON  PLU=ON  L73 AND L116
L118          75 SEA SPE=ON  ABB=ON  PLU=ON  L115 OR L117 OR L48
L119           4 SEA SPE=ON  ABB=ON  PLU=ON  L118 AND L57 AND L59
L120           4 SEA SPE=ON  ABB=ON  PLU=ON  L118 AND L59
L121          78 SEA SPE=ON  ABB=ON  PLU=ON  L114 OR L115 OR (L117 OR
                L118 OR L119 OR L120)
L122          15 SEA SPE=ON  ABB=ON  PLU=ON  L121 AND L78
                D L1 PRAI
L123             QUE SPE=ON  ABB=ON  PLU=ON  PY=<2005 NOT P/DT
L124             QUE SPE=ON  ABB=ON  PLU=ON  (PY=<2005 OR PRY=<2005 OR
                AY=<2005 OR MY=<2005 OR REVIEW/DT) AND P/DT
                SET LINE 250
                SET DETAIL OFF
                SET LINE LOGIN
                SET DETAIL LOGIN
L125          10 SEA SPE=ON  ABB=ON  PLU=ON  L122 AND (L123 OR L124)
                D SCA
                D QUE STAT L125
                D L125 1-10 IBIB ED ABS HITSTR HITIND
                D QUE STAT L45
L126           3 SEA SPE=ON  ABB=ON  PLU=ON  L73 AND L45
                D SCA
L127       6324 SEA SPE=ON  ABB=ON  PLU=ON  L45 AND (CHELAT? OR L116)
L128       1908 SEA SPE=ON  ABB=ON  PLU=ON  L127 AND L85
L129         20 SEA SPE=ON  ABB=ON  PLU=ON  L128 AND L78
L130          9 SEA SPE=ON  ABB=ON  PLU=ON  L129 AND L57
L131         20 SEA SPE=ON  ABB=ON  PLU=ON  L129 AND (L80 OR CELLULOS?)
L132          9 SEA SPE=ON  ABB=ON  PLU=ON  L130 AND L131
L133             QUE SPE=ON  ABB=ON  PLU=ON  POLYMER## OR HOMOPOLYMER##
                OR COPOLYMER## OR TERPOLYMER## OR RESIN? OR GUM? OR
                POLYM?
L134       2012 SEA SPE=ON  ABB=ON  PLU=ON  L127 AND L133
L135         22 SEA SPE=ON  ABB=ON  PLU=ON  L134 AND L78
L136         22 SEA SPE=ON  ABB=ON  PLU=ON  L135 AND (L80 OR CELLULOS?)
L137          9 SEA SPE=ON  ABB=ON  PLU=ON  L136 AND L132
L138          9 SEA SPE=ON  ABB=ON  PLU=ON  L130 OR L132 OR L137
L139         23 SEA SPE=ON  ABB=ON  PLU=ON  (L129 OR L130 OR L131 OR
                L132) OR (L135 OR L136 OR L137 OR L138)
L140          1 SEA SPE=ON  ABB=ON  PLU=ON  L139 AND (L47 OR L51)
                D KWIC
L141          1 SEA SPE=ON  ABB=ON  PLU=ON  L139 AND (BLEACH? OR L53)
                D KWIC
L142          9 SEA SPE=ON  ABB=ON  PLU=ON  L138 OR L140 OR L141
L143          7 SEA SPE=ON  ABB=ON  PLU=ON  L142 AND (L123 OR L124)
L144          0 SEA SPE=ON  ABB=ON  PLU=ON  L126 AND L78
```

```
L145          2 SEA SPE=ON  ABB=ON  PLU=ON  L126 AND (L123 OR L124)
                D SCA
L146          1 SEA SPE=ON  ABB=ON  PLU=ON  L145 AND (L59 OR L80 OR
                CELLULOS?)
L147          8 SEA SPE=ON  ABB=ON  PLU=ON  L143 OR L146
L148          8 SEA SPE=ON  ABB=ON  PLU=ON  L147 NOT L125
L149          1 SEA SPE=ON  ABB=ON  PLU=ON  L148 AND L73
                D SCA
L150          8 SEA SPE=ON  ABB=ON  PLU=ON  L148 OR L149
                SAV TEMP L125 MIN564HCP/A
                SAV TEMP L150 MIN564HCPA/A
                D QUE STAT L150
                D L150 1-8 IBIB ED ABS HITSTR HITIND
```